

# THE BOSTON Medical and Surgical JOURNAL

VOLUME 190

JANUARY 24, 1924

NUMBER 4

## Original Articles

### METABOLISM OBSERVATIONS IN SCLERODERMA

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[From the Evans Memorial Laboratory, Boston]

SCATTERED through medical literature, but never brought together in one place, there is considerable evidence of a close relationship between the metabolism of various systems of the body; evidence that disease in any one of the systems—muscles, bones, joints, nervous system—may lead to secondary changes in all the other systems including the skin. The findings in the present case bring out, what has not been brought out before, that structural and metabolic changes in the skin may be responsible for changes in the muscles, joints, and bones. For the purpose of broadening our understanding of the general metabolism it seems worth while to publish the findings and at the same time to bring together some of the scattered evidence referred to above.

The patient on whom these observations were made was a married white man fifty-seven years old who, except for two or three short attacks of "lumbago" following exposure during the past eighteen years, had never been ill until his present illness began two years ago. He never had syphilis or gonorrhea. There was nothing suggestive in his family history.

His first symptom was stiffness of the right elbow. Following medical advice, he took some form of "serum treatment" and had a number of teeth extracted. Within a few days his hands and fingers became swollen. The swelling soon subsided and these joints became stiff. About six months afterwards his knees were swollen for a short time. Later on his shoulders and then his hips became stiff. Finally his back became stiff. His toes and ankles did not become affected.

Several months after his first symptoms appeared, the skin of the forearms and hands became scaly and later thick, stiff, smooth, and shiny. The skin condition gradually extended until more than half the body surface became affected.

At the time the skin changes first appeared physical examination, including roentgenographs, showed no joint change; the condition at that time was believed by his physician to be some kind of a chronic myositis.

He was rather short of breath; his joints were slightly tender on motion; aside from this and the stiffness and impairment of motion resulting from his thick taut skin he had no subjective symptoms.

Physical examination showed a fairly well developed, but rather slender man, whose color was rather

pale. The skin of his legs, feet, hands, forearms, abdomen, flanks, and the upper part of the front of his chest, was stiff, shiny, glistening, thick, parchment-like, somewhat reddish in color, and so hard and tough that almost no impression could be made on it with the finger. The skin of the lower legs and feet was covered with coarse dry scales which came off easily; this, he said, was the appearance of the skin of his forearms and hands when the skin changes first appeared, and before the skin became smooth, shiny, and atrophic. The finger and toe nails were dry, rough, and atrophic, and showed longitudinal cracks. He carried himself in a stooping posture, with knees and elbows stiff and partly flexed. His forearms could not be extended beyond a right angle. His legs could not be fully straightened out. His ankles were stiff, his finger joints were rather stiff; they could be moved a little, but could not be straightened out. There seemed to be some stiffness of the sterno-cleido-mastoid. The stiffness of the joints appeared to be due to the rigidity with which they were held by the thick, stiff, inflexible, integument, and not the result of any ankylosis. Movement of the joints caused slight pain.

The muscles throughout were much atrophied. His pupils reacted to light. There was no exophthalmos, no nystagmus, no thyroid enlargement, and no other glandular enlargement. There were no tremors, there was no incoördination. The reflexes were rather difficult to elicit on account of the rigidity with which the joints were held by the skin, but were not otherwise abnormal.

Examination of the lungs showed unimpaired resonance and normal breath sounds. No râles could be heard. Expansion was very poor and almost entirely diaphragmatic, apparently on account of the inelasticity of the skin.

The heart was not enlarged. The sounds were of good quality. There were no murmurs. The rate was 120; there were occasional premature beats. The systolic blood pressure was 122; the diastolic, 82.

Roentgenographic examination showed atrophic changes in the joints and bones.

The laboratory findings were as follows:

Urine		
24 hour quantity		720 c.c.
specific gravity		1.028
urea		15 grams
albumin		none
sugar		none
acetone		none
bile		none
sediment: small in amount; shows rare squamous cells and leucocytes but no casts.		
(nitrogen partition)		
total nitrogen	9.70 grams	
urea nitrogen	7.20 grams	74.2%
uric acid nitrogen	0.19 gram	2.0%
ammonia nitrogen	0.52 gram	5.4%
creatinin nitrogen	0.24 gram	2.5%
residual nitrogen	1.55 grams	15.9%

Phenolsulphonephthalein kidney function test showed 55% excretion in the first hour, 17% the second hour; a total of 72% in two hours.

## Blood examination

Wassermann test	negative
hemoglobin	90%
red count	5,780,000
white count	6,250
polymorphonuclear neutrophils	60%
lymphocytes (small 15%, large 14%)	29%
large mononuclear cells	3%
eosinophiles	2%
mast cells	0.5%
plasma cells	0.5%
transitionals	4.0%

Blood chemistry—(per 100 c.c. blood)  
 35.4 mgm. non-protein nitrogen  
 16.0 mgm. urea nitrogen  
 4.0 mgm. uric acid  
 108 mgm. sugar.

The basal metabolism (mean of two determinations) gave 1584 calories which is from +4 to +19% according to the standard used.

His vital capacity was 1900 cc. which is about 50% below his calculated standard. This seemed to be due to the poor expansion and inelasticity of the skin, noted above. Weight 56.9 kilos. Height 174 cm. Alveolar air 3.6% carbon dioxide; a tension of 26 mm.

## DISCUSSION

It is to be noted that roentgenographic examination made when the skin changes first appeared showed no changes in the bones or joints; the bone and joint changes were first noted a short time previous to the present examination. These atrophic changes in the bones, joints, and muscles are of considerable physiological interest in that they supplement findings in other conditions showing the close inter-relationship of structure and function of the muscles, joints, bones, nervous system, and skin. Healthy nutrition and normal functioning of each of these systems depends on normal functioning in each of the other systems.

Begin, for example, with the *skeletal system*:

The osseous plates of cancelli that make up bone are laid down of such density and are arranged in such structural form as best to support the strains and stresses to which the bones are subjected. When the direction or amount of stress and strain changes, the structure and density of the bones affected undergo corresponding change. Abnormalities of structure and density may result from disease not only of bone itself, but also from disease of the joints, muscles, and nervous system.

Secondary bone atrophy occurs in cases of joint disease—hypertrophic arthritis, atrophic arthritis.<sup>2</sup> In myopathies of various kinds the bones corresponding to the affected muscles undergo atrophy and rarefaction and the ridges for muscular attachments become smoothed down.<sup>3</sup> In wasting diseases, and when the muscles are immobilized in plaster, a similar form of bone atrophy occurs.<sup>1</sup> Bone architecture is maintained at a proper efficiency in structure and density as a result of the continu-

ous pressure and work tests of normal activity; by means of these tests through the central nervous system, structure and density are adapted to requirements. But if the nervous mechanism through which this adaptation is automatically maintained is damaged the adaptation fails and normal bone architecture is lost. Such is the case in the Charcot joints of tabes and syringomyelia and the osteoporosis seen in cerebral palsies, poliomyelitis, tabes, and syringomyelia.<sup>4</sup>

Changes in the *muscular system*—wasting and atrophy—are noted as a result of bone disease—osteomalacia,<sup>5</sup>—disease of the nervous system—disease of the lower motor neurone<sup>6</sup>—and may be very considerable and very rapidly progressive in cases of chronic arthritis.<sup>7, 8</sup>

Numerous forms of trophic changes occur in the *skin and nails* as the result of disease of the nervous system—tabes, and peripheral and central palsies.<sup>9</sup> Conditions resembling scleroderma occur in cases of peripheral nerve palsies of long standing, hemiplegic limbs, and progressive facial hemiatrophy.<sup>6</sup> A similar condition occurs in primary progressive atrophic arthritis<sup>3</sup> and in certain forms of myositis.<sup>8</sup>

Changes in the *joints* as the result of nervous disease occur in tabes, syringomyelia, and chronic hemiplegia.<sup>6</sup>

All these findings are supplemented by the bone, joint, and muscle changes secondary to skin disease in the present case. The bone and muscle changes in this case have been prominent enough at certain stages to seem primary, and have led at times to the diagnosis of atrophic arthritis and myositis ossificans progressiva. But a full review of all the facts shows that this is not a case of primary progressive atrophic arthritis with secondary trophic changes in the skin and nails. Roentgenographs, taken in the early stages of the skin disease, showed no changes in the bones and joints. It has been only recently as the result of the almost complete immobilization resulting from the extreme stiffening of the skin that secondary atrophic changes have appeared in the joints and bones. As for the possibility of a myositis ossificans progressiva with secondary changes in the skin, which appears to have been considered in the early stage, or a dermatomyositis, these, too, have become ruled out with the development of the condition; the muscles show no evidence of disease, only secondary atrophy. But the fact that the joint, bone, and muscle conditions have attracted attention in this case, emphasizes very clearly the point to be brought out in this discussion, namely, that just as disease of the joints, bones, and muscles can lead to secondary changes in the skin; so, also, scleroderma, at least among the skin diseases, can lead to secondary changes in the joints, bones, and muscles.

The findings in this case add further weight

to the evidence pointing to disuse atrophy as a cause of disease.

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## THE USE OF THE SCHICK TEST IN A BOYS' SCHOOL

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THE use of the Schick test for the detection of immunity to diphtheria, and the administration of toxin-antitoxin for the purpose of acquiring immunity to this disease are two well-known measures in modern preventive medicine. Many articles on this subject have appeared recently, and the following is reported largely because the work was carried on under conditions differing somewhat from the usual.

The work was done at St. Paul's School, a private school for boys with an enrollment of approximately four hundred. Practically all of the boys came from families which have not lived in the congested parts of the city. Most of their school life has been spent in boarding schools, and their summers have been spent away from the city. They formed what might be called an "isolated" group, or one which had not had the opportunity to acquire an immunity to this disease, as is supposed to be the case with children who have lived in the thickly settled parts of a large city.

The material used for the Schick test, as well as the toxin-antitoxin, were obtained from the laboratory of the Massachusetts State Board of Health. The toxin solution was mixed immediately before being used, one bottle being prepared at a time. In this way a fresh and reliable preparation was obtained. In giving the Schick test, care was taken to give an exact dose, 0.1 c.c., and in every case to produce a good wheal.

During the first week of October, 1922, the Schick test was given to 379 boys. Of these, 328, or 86.5 per cent., gave a positive reaction. Twenty-three, or 6 per cent., gave a doubtful reaction, and only 28, or 7.5 per cent., gave a negative reading. Zingher,<sup>1</sup> in his work in the

public schools of New York City, found positive reactions ranging from 67 per cent. in one school to 13.6 per cent. in another school.

TABLE I

## Results of First Schick Test

Total		379		
"	+	238	—	62.8 per cent.
"	++	86	—	22.7 " "
"	+++	4	—	1. " "
"	±	23	—	6. " "
"	—	28	—	7.5 " "

Following the Schick test, toxin-antitoxin was given in a series of five doses, at intervals of one week. The respective doses were 0.1 c.c., 0.2 c.c., 0.4 c.c., 0.8 c.c., and 1.5 cc. In May, 1923, another Schick test was done. There was a total of 259 boys who received the entire five doses, and of these, 225, or 86.8 per cent., gave a negative reading on the second test. Twenty-four others, or 9.2 per cent., gave a doubtful reading, leaving only 10, or 3.8 per cent., who remained positive. Zingher found, in the work referred to above, a percentage of negative tests following toxin-antitoxin ranging from 87.5 per cent. to 21.3 per cent.

These results are summarized in Table II. It is interesting to note, in this table, the results in the cases which for one reason or another received less than the five doses. There were eleven boys who received the first four doses, and of these, ten changed from + to —. Two received the first three doses and both changed from + to —. One received the first two doses, and in this case a doubtful reading was received in the second test. Two boys received only the initial dose, and one of these changed from ++ to —, while the other remained +.

TABLE II

Total	Cases having Schick, T.A.T., and Re-Schick	
275		
5 Doses	Positive changed to negative, 225 or 86.8%	
259	" " " ± 24 " 9.2%	
	" remaining + 10 " 3.8%	
4 Doses	Positive changed to negative, 10 " 90%	
11	" " " ± 1 " 10%	
3 Doses	Positive changed to negative, 2 " 100%	
2		
2 Doses	++ " " ±	
1		
1 Dose	++ " " —	
2	+ remaining +	

Table III gives the readings of the first Schick tests in three groups of boys: (a) those who had previously had diphtheria, (b) those who at some previous time had been given antitoxin, and (c) those who at some previous time had had diphtheria and had been given antitoxin.

The table shows nothing new and is included largely for completion. It is interesting to note, however, that of the eleven boys who had a history of diphtheria, nine gave a positive reading on the first Schick test.

TABLE III

History of Diphtheria, Antitoxin or  
Diphtheria and Antitoxin

Total	Diphtheria	Antitoxin	Diphtheria and Antitoxin
47	11 Schick + ± — 9 0 2	25 Schick + ± — 22 0 3	11 Schick + ± — 6 1 4

Before the first Schick test was given, a history of anaphylactic condition was taken, and the question arose as to the advisability of giving toxin-antitoxin to these boys. Fifty-two of the 67 boys having a history of any of these conditions received the T. A. T., and none of them had any unusual reaction.

TABLE IV

History of Anaphylactic Conditions	T.A.T.	No T.A.T.
Asthma	2	3
Hay Fever	39	7
Asthma and Hay Fever	6	5
Food	6	
Total	52	15

During the winter term the number of cases of respiratory tract infections was much less than in former years, and it was thought that possibly this marked reduction in the number of cases might be due to a non-specific immunity following the use of toxin-antitoxin.

These cases were studied from this viewpoint, and there appeared to be no connection between the use of toxin-antitoxin and the low morbidity rate. Sixty-eight per cent. of the school received toxin-antitoxin, and 77 per cent. of those admitted to the Infirmary during the winter term had had toxin-antitoxin. The marked drop in the number of house patients began about the middle of February, four months after the administration of toxin-antitoxin, and it was thought that possibly this drop was an indication of the development of an immunity. It was found, however, that 76 per cent. of the patients admitted beginning February 15 had had toxin-antitoxin. This would seem to show that there was no immunity to respiratory tract infections from the use of diphtheria toxin-antitoxin.

We do not know whether there is an advantage in giving toxin-antitoxin in five graduated doses rather than in the customary three doses. In the entire group of 275 listed in Table II there were only two boys who, because of the reaction from toxin-antitoxin, came to the In-

firmary to go to bed. The reaction consisted of local dermatitis and edema, nausea, headache, and slight rise of temperature, lasting two or three days.

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## THE BABY AURAL CLINIC AT THE MASSACHUSETTS CHARITABLE EYE AND EAR INFIRMARY\*

BY CHARLES ORRIN DAY, M.D., BOSTON

At the Eye and Ear Infirmary, the ear cases of six years old and under are not seen in the main clinic, where they cry and cause disturbance, but in the so-called "baby room."

By the kind permission of Dr. Crockett, Surgeon-in-Chief of the hospital aural staff, the writer is enabled to make a report of the work in this room.

Here the small patients are examined lying down on a table, and where restraint is needed, their arms firmly secured by a blanket, which is pinned about them, from just below the shoulders down, with safety pins. The head is steadied in the proper position by the nurse in attendance.

Children seen in the baby room constitute about one-third to one-fourth of the total ear clinic, which may run as high as 125 or more in a day. The proportion is less in summer, when acute naso-pharyngeal conditions are rare.

In passing, it may be well to emphasize certain points of technique taught in the baby room, where the history of the case has first been obtained from the person bringing the child in. Such points are the importance of pulling down the auricle on account of the more nearly horizontal position of the infantile drum membrane, instead of upward and backward, as in the adult, the using of ear specula, small enough to fit well into the canal, but as large as possible, in order to admit the greatest amount of light, the necessity of having the light well behind the patient and the head-mirror not too near the ear, in order to get the best focus. A small head-mirror, with a large central opening, has generally been found the most satisfactory for ear examinations.

Both ears should be examined in every case and where discharge or cerumen is present, it should be carefully wiped away with cotton on a light wire applicator, at least, at the first examination. Many mistakes in diagnosis have been made from neglecting these procedures.

The possibility of the ear trouble being the result of acute exanthemata or other infectious

\*Read at a meeting of the New England Pediatric Society, March 9, 1923.



conditions, must never be lost sight of. These must be recognized and isolated. At the Infirmary the Gardner building is provided for such of these as need admission. Many are sent to the South Department of the Boston City Hospital.

The signs of mastoiditis, and its complications, must always be looked for, the throat and nose carefully inspected for diseased tonsils and adenoids or acute infections or contagious diseases as diphtheria.

It is not with the scope of a simple description of this kind, to attempt to give an account of the characteristic histories, symptoms, diagnosis and prognosis of the conditions met with in the baby room, which are, of course, the everyday ones ordinarily seen in pediatric practice. I will attempt, however, to speak of those most commonly met with, and will give a brief description, in each case, of the methods employed in treating them at the Eye and Ear Infirmary.

Cases of acute otitis media, from the point of view of treatment, may be divided into two classes, (a) those which do not, when seen, require incision of the ear drums; (b) those which do require incision of the ear drum. In class (a) may be listed those where the pain is slight, the rise of temperature and general symptoms attributable to the ear of moderate nature and evanescent, and the examination of the drum shows the landmarks distinct and in normal relation, with no bulging suggesting the presence of serum or pus. A certain amount of redness of the drum is seen, but usually localized in the upper parts and along the handle of the malleus.

This class is not common in the baby room, most of the cases coming there requiring incision of the ear drum. The treatment is directed along three lines—(1) the relief of pain, (2) the treatment of the nasopharynx, thereby opening up the Eustachian tube, (3) the prevention of future attacks.

For the relief of pain, there is often suggested the external application of heat to the ear, hot-water bag, flaxseed poultice, hot flannel, etc., with rest in bed. Adrenalin 1-1000 dropped into the ear once or twice at intervals of one hour or two, five or six drops being warmed in a teaspoon and poured in, may give relief by lessening the congestion. Gentle irrigation, with fairly warm water in a fountain syringe, is soothing and better than dropping in hot oil, laudanum, etc., which tend to obscure subsequent examinations. Carbolic acid M x, in an ounce of glycerine, warmed and dropped in is very soothing and can be easily washed out. Internally small doses of paregoric or aspirin, mixed with sweetened water are sometimes prescribed. Catharsis and the free drinking of water are important. Such treatment is most often prescribed to be used during

the night in case pain returns before the patient can be brought again to the hospital.

Treatment of the nasopharynx consists in dropping into the nares, with the patient lying on the back, 4 or 5 drops each time, at intervals of three hours, more or less, one of the following:

(a)	Adrenalin, 1-1000	Mxx	
	Oil Sweet Almonds	ad 3ss	Mix
(b)	Menthol	gr. ¼	
	Camphor	gr. ¼	
	Iodine	gr. ¼	
	Albolene	3i	Mix
(c)	Argyrol, 5 or 10% sol.		

The prevention of future attacks is mostly attained by getting the nasopharynx into condition, by the removal of adenoids or large tonsils, where indicated, attention to the teeth, general building up, diet, improving living conditions. The careful general examination and supervision of a medical man, is usually indicated. Tonics are sometimes prescribed as saccharated ferrous carbonate, ovoferin, bitter wine of iron and nux, cod liver oil, etc.

Such general measures are, of course, also useful in the treatment of the chronic forms of ear diseases, as well.

When the otitis progresses too, or has already reached the stage where incision is necessary, as indicated by severe persistent pain, general symptoms, redness and bulging of the ear drums,—this should be done promptly. If the ear drum has ruptured spontaneously and drainage is free, incision may not be necessary, if the above are absent.

For little children at the Infirmary, a general anesthetic is usually employed with the patient on the table—nitrous oxide gas with or without oxygen, being given to those of five years and over, while for those under five, ether is used. Very small babies are sometimes firmly held—particularly if there is any contraindication to the giving of ether—and the operation done without an anesthetic. The pain to the patient, and the danger of struggling, resulting of slipping of the knife, with possible damage to the ear, are objections to this procedure in children over a year old.

After opening the drum, if only blood or serum appears, dry wipes with cotton wound on tooth-picks, and wicking, done in as aseptic manner as possible, are generally preferred. The wicks are changed at stated intervals, or when saturated. With many unintelligent parents, however, frequent syringing with warm saline, a teaspoonful of table salt to a pint of water, boiled and cooled, the small rubber ear syringe being used, is easier, cleaner and there is less danger of trauma. This treatment is always used where the discharge is purulent and thick, or where the ear, from the severe congestion of

its membranes, continues to be painful even after the drum has been freely opened. Wicks are used after syringing and general measures advised. These cases are subsequently followed and it is necessary to make sure that the ear is draining well. If not, a continuance of symptoms, with pain, bulging of the drum, pulsating discharge, nipple perforations may be noted. Possible complications must be borne in mind. A secondary opening of the ear drum is rarely necessary when properly done at first. Usually when it is thought to be so, involvement of the mastoid antrum is present.

After the ear has been opened, attention to the nasopharynx, with general measures, are instituted. After five or six weeks, if the discharge still persists, and is of the profuse, purulent type, indicating mastoid antrum infection, the case may be sent to the hospital for the simple mastoid operation to conserve hearing. If the discharge has persisted for twelve weeks or more, it is classed as a chronic case.

In chronic suppurative otitis media, the discharge is of two main types, mucoid or mucopurulent, suggesting chronic inflammation of the Eustachian tube, resulting from an abnormal condition of the nose and throat, or the thick, purulent, creamy sort, indicating the involvement of the mastoid. The pus may be foul from bone necrosis or a mixed bacterial infection. Syringing or wiping the ear, followed by the dropping in of the hospital solution M, boric acid powder 5ss in alcohol  $\mathfrak{J}$ i, attention to the nasopharynx, removal of adenoids and tonsils when indicated, and general hygiene, are carried out. Aural polyps when present are removed in the hospital under ether. Granulations are touched with silver nitrate bead or 50 per cent. solution. Mercurichrome 2 per cent. solution has been used in the ear to advantage, but stains the structures, obscuring examination. A short course of the boric acid alcohol may remove a foul odor due to mixed infection and indicate that bone necrosis is not present. Frequent careful cleaning of the ear by the doctor is important. Tuberculous middle ears with extreme chronicity, extensive bone destruction, often with sequestra, purulent often foul discharge, positive von Pirquet, etc., are occasionally seen. In these cases of bone involvement, a simple or radical mastoid operation may become necessary. Middle-ear operations, as ossiculectomy, are rarely indicated in children of this age. Fresh air, exposure to sunlight, keeping the bowels open are important. When cholesteatoma is present in the mastoid antrum, a radical mastoid operation is usually indicated.

So-called "effectus" ears are not rare, where a previous discharge has dried up, leaving the drum often perforated, scarred, adhesions in middle ear, ossicles may be displaced or missing. The hearing may be permanently impaired. These often flare up under slight provocation,

as colds. The treatment is boric acid alcohol, attention to the nose and throat and general measures.

Catarrhal or secretory otitis media, acute or chronic, is usually seen in these children, as a result of hypertrophied adenoids and tonsils, followed by Eustachian tube catarrh. The retracted drum is commonly found in these cases and is an important sign of adenoids that ought to come out. Impairment of hearing may be noted by the parents. The treatment is a nasopharyngeal house cleaning, followed by a course of Politzerization—say twice a week for a time. This is easily carried out in these small patients where catheterization is not practicable. When ear and nasopharyngeal symptoms are present, the presence of adenoids requiring removal may be assumed, and an examination for them is not necessary except where they have already been operated on. Here the nasopharynx may be sometimes seen with the mirror, but a digital examination is usually necessary to see if complete adenectomy has been done.

Tonsils are removed because of obstructive hypertrophy, recurrent colds and sore throats, cervical adenitis and general poor health, for which they may seem to be responsible. This removal is avoided at the Infirmary under five unless strongly indicated, not only on account of the severity of the operation, but because when this is done, other lymphoid tissue in the throat is apt to markedly hypertrophy, suggesting that the tonsils must have some definite function in early childhood, though little understood. In such cases, the operator may be unjustly blamed for having done an incomplete operation.

Inflamed tonsils may cause pain referred to the ear.

In acute ears, removal of the adenoids is sometimes advised at the same time when paracentesis is done for the first time, the idea being to quiet down the nasopharyngeal infection and to attain early opening of the Eustachian tube. The writer tried this on a short series of 10 cases, but was unable to see that any particular benefit resulted. Early adenectomy after the acute nasopharyngitis has subsided a little, is usually indicated.

Foreign bodies in the ears are of every description, but glass beads, peas, beans and little stones are the commonest. These do little harm in themselves unless allowed to remain indefinitely, unskillful attempts at removal being responsible for most of the damage. Occasionally they have been forced through the ear drum by the endeavors of the physician to remove them with forceps. One case of resultant facial paralysis was seen. They can be often syringed out if they are of such a nature as not to swell when wet, but at the hospital the cerumen or foreign body hook, something like a minute, bent, perineal tenaculum, is usually em-

ployed, the hook of which can be easily slipped by the object. One can do considerable damage with this if not skilled in its use. Ether is often necessary—always when there is any difficulty at all.

Children are seldom brought to the clinic because of wax in the ear, though it often has to be removed by wiping or syringing, in making the routine examination.

Infection of the external canal or furunculosis, is not as common in children as in adults, and usually results from a chronic discharge infecting the canal. It is treated by incision of the furuncle when indicated, cleanliness, syringing and ear drops, either the hospital Canal Mixture Xi—Carbolic acid Mx in glycerine 3i or in the Sol. M, (boric acid 3ss in alcohol 3i), the former being usually employed when there is much pain present, with acute inflammation, the alcohol drops oftener in the later stages of the trouble, and to prevent recurrence. Hot poulticing may be necessary to bring the furuncle to a head. When the external otitis results in a post-aural abscess through perforation of the posterior external canal wall, and a middle-ear condition is present, it may be difficult, or impossible, to tell whether the abscess is due to this cause, or from a perforation directly from the mastoid antrum. X-rays are of little help in these cases because of the undeveloped nature of the mastoid cells, and the definite source of the abscess may only be known when it is opened on the operating table.

The differential diagnosis can usually easily be made in adults through the hearing test, local examination and x-ray, and the history is usually helpful.

In passing, it may be said of x-rays of mastoids in small children that they are of value in proportion to the development of the mastoid cells. At the Infirmary they are taken in these cases if the head of the service desires it and the child is big enough to lie still without being etherized. They are apt to be unsatisfactory and are not usually taken as a routine.

Erysipelas of the auricle is a serious complication in babies and is most often post-operative.

Eczema auris is usually the result of a chronic discharge, though it may be part of a general eczema. The chronic otitis media is looked after and regular extra aural eczema treatment instituted.

Children are often seen in the clinic with pain in the ear referred from an erupting tooth, the ear drum being normal. The gums in cases of otalgia should always be looked at. Sometimes the disturbance in the mouth sets up a mild otitis media.

Acute cervical adenitis is often seen in the ear clinic, the child complaining of pain in the ear. Pediculosis capitis may be a cause of this condition.

Malformations of the auricle are usually not operated on in children of this age.

Fungus infection of the external auditory canal or otomycosis is not often seen in the baby room. The treatment is cleanliness and boric acid alcohol.

When the complications of otitis media are seen as acute mastoiditis, sinus infections, meningitis and brain abscess—the latter rare in children of this age—they are at once admitted to the hospital. The mastoid cases are usually of the post-aural abscess type, due to the lack of development of the mastoid bone at this age, and the early perforation of the cortex over the mastoid antrum by the infection. Post-aural redness, swelling and fluctuation, are often present, the post-aural folds in the skin may be obliterated and the auricle is pushed out from the head. General symptoms as fever, etc., may be very slight and little pain is present. Among the most puzzling cases to handle are those of double otitis media, discharging freely, high temperature and white count, the child sick and no mastoid signs present on either side. It may be necessary to watch the case, and if one side improves, open the mastoid on the other side and explore the lateral sinus and finally ligate the jugular vein. It may be necessary to ligate both jugulars and this may be done if a week is allowed to intervene. If the surgeon guesses wrong on the side he opens first, however, the outlook is serious. General septicemia and pyemia with meningitis is very apt to result. Sometimes tenderness over the jugular vein is an aid in deciding, but many such cases have been allowed to die because of the difficulty experienced by the operator in making up his mind.

New growths of the auricle, middle ear, and mastoid are rare at this age. The writer followed for a long time at the Infirmary, one case of lymphosarcoma of the mastoid, which steadily grew worse in spite of operation, radium and x-ray treatment.

Congenitally deaf, and, therefore, dumb children, constitute an important class not infrequently seen at the hospital. Their mental condition must always be considered, but they often appear perfectly healthy, bright and normal in other respects. The question of congenital syphilis is always important in these cases. The extent of their deafness can often only be determined by repeated observations over months or years, as hearing tests are unsatisfactory at this age. The older children can be tested out, however, by questions, spoken or whispered while they are made to look away from the examiner, and with the little ones, different noises as striking glassware or metal dishes, or dropping some heavy object to the floor, whistling, clapping the hands to see if their attention is attracted. It is often helpful to rotate the child slowly in the Bárány chair, 10 times in 20 sec-

onds, to the right or left, he being held with his eyes covered by his mother or nurse, who sits herself in the chair. If the proper nystagmus results, it indicates that a functioning static labyrinth and probably cochlea may be present. Such a positive reaction is more apt to occur in congenital than in acquired deafmutism, and the outlook for the possible development of hearing is somewhat better in such cases. If there is any question as to the child's having normal hearing, he is at once turned over to the Social Service department of the hospital, who arrange for admission to one of the schools for the training of deaf children in Massachusetts. Children are not admitted to such schools until they reach the age of three, but as it often takes from one to three years to get them in, it is important to make application at once. These are private institutions, subsidized by the State, which pays the expenses of children when the parents are unable to do so. Others pay their own expenses, and these may reach \$1,000 a year. The State is responsible for the education of all children up to nine years of age. Among the boarding schools are the Clark School for the Deaf, at Northampton, the school at Beverly, Mass., the Boston School for the Deaf (Catholic) at Randolph, and the Sarah Fuller Home for Deaf Children, from three to six, at Medford. In these schools they are given kindergarten and cultural training with lip-reading, etc. They are graduated from these schools to their homes, from which they attend the Horace Mann Day School on Newbury St. The State pays for the transportation of the children to and from their homes, and they are met by the matrons of the school at North Station, Park Street, and other central points.

The results of the treatment in the baby room are shown by an analysis made by the writer of the cases admitted to the hospital from it during February, March, and April, 1921. There were 68 of these, of which 44 were cases of acute otitis media with mastoiditis, admitted the first day seen. There were four non-aural cases and 13 of a chronic nature, most of which had not had proper treatment. One case of hemorrhage following paracentesis done outside the hospital, two cases of acute otitis media without mastoid signs, but with high fever, which had been going some time before being seen, who subsequently developed septicemia and pyaemia. There were only four cases which were really under treatment in the clinic before they developed mastoiditis and in all but one of these, this complication could be attributed to the fact that the parents did not bring the child back to the hospital when they were told to. These figures would seem to indicate that the treatment in the baby room was effectual, at least in preventing mastoiditis with its complications. These should be rarer than they are, and when they do occur, many cases would

give a history of delay in calling the doctor, or dependence was placed on poulticing, and a prompt and free incision not made in the drum membrane. Doubtful cases should be opened, and this is particularly true in the case of babies who cannot localize pain, and whose general symptoms may be indefinite. It will do no harm to reiterate, once more, the oft-made plea for the frequent examination of ears in children.

298 Marlborough Street.

## REPEATED TUBAL PREGNANCY

BY LOUIS E. PHANEUF, M.D., F.A.C.S., BOSTON

REPEATED tubal pregnancy is not as infrequent as it was presumed to be during the pre-aseptic days. The advent of aseptic surgery, making possible the invasion of the peritoneal cavity, has been responsible for the recognition of this condition a number of times.

Parry,<sup>5</sup> 1876, collected eight cases in which tubal gestation had occurred a second time in the same patient, and stated that Primrose was the first to describe such a condition in the year 1594. The first series of cases was reported by Abel<sup>1</sup> in 1893. Following this, Dorland<sup>2</sup> 1898, Weil<sup>11</sup> 1899, Varnier<sup>10</sup> 1900, and Pestalozza<sup>8</sup> 1901, called attention to the subject in question. The last author had collected 111 cases up to 1901.

Sampson,<sup>8</sup> 1913, was of the opinion that, because of the frequency of recurrences, one was justified in removing the uterus and the tube of the opposite side at the time of the first operation.

Smith<sup>9</sup> 1914, in analyzing the final results in 192 cases operated upon for ectopic pregnancy, holds that a patient who has had tubal pregnancy is less fertile than normal, and is exposed, to a great extent, to a probable second extra-uterine pregnancy. To bear this out, he states that within five years after the first operation, 144 patients, in whom subsequent conception was theoretically possible, had 47 uterine and 23 repeated tubal pregnancies. This author agrees with Sampson that the removal of the uterus and the non-pregnant tube is justifiable at the first operation for ectopic gestation.

Ribemont, Dessaignes, and Lepage<sup>7</sup> 1914, in discussing the etiology of extra-uterine pregnancy, wrote as follows: "Among the causes which we have described, many can attack both tubes at the same time; recurrences are not uncommon (Olshausen). For this reason Varnier wonders if the ablation of both tubes is not to be considered, in principle at least, each time that intervention for ectopic gestation becomes a necessity. Funck-Brentano, on the other hand, has been able to collect 188 obser-



vations on women who have been operated upon for ectopic gestations and afterwards had normal pregnancies. Leguen concluded, with reason, that the adnexa of the opposite side should be extirpated, if diseased, and left in if normal in appearance. Karl Abel had already advised (1893) the removal of the non-gravid tube if found kinked or spheroidal in shape."

In Cragin's<sup>2</sup> text-book on Obstetrics (1916) the following remarks on the subject may be found: "Ectopic gestation may occur in one tube at one time and in the opposite tube subsequently, as illustrated by the author's case upon whom he operated February 25, 1905, for ectopic gestation with ruptured right tube, and who, subsequently (September 6, 1906) required operation for an ectopic gestation in the left tube. Before each operation the patient passed a complete decidua sac."

In Cragin's service at the Sloane Hospital during the three and a half years preceding 1916, 35 cases of ectopic gestation had been operated upon; among these there were six cases which had previously been operated upon for ectopic gestation. In five of the cases the extra-uterine pregnancy was found on the opposite side from the first, while in one case it occurred for the second time on the same side, the tube not having been removed at the first operation.

DeLee,<sup>3</sup> 1918, stated: "Repeated extra-uterine pregnancies, after months or years, are not seldom observed, and the recurrence may be situated in the same tube originally affected, or in the other."

Williams,<sup>12</sup> 1919, in his text-book on Obstetrics, lays emphasis upon the not infrequent occurrence of repeated tubal pregnancy, and brings the literature on the subject up to date.

In several of the cases described in the literature only a few months had elapsed between the two gestations, while in others an interval of several years separated them.

This condition occurred twice on the Gynecological Service of the Carney Hospital during a period of approximately ten years (June 28, 1913-October 25, 1923). The first case was operated upon twice by Dr. A. McK. Fraser and is reported through his courtesy, while the second was in the writer's care both times. It is of interest to note that in these two cases, as well as in Cragin's case, the first ectopic gestation was found in the right tube and the second in the left.

CASE No. 1. Mrs. C. H. Age 24. Born in Boston. Housewife. Referred to the Carney Hospital by Dr. D. J. Harrington, on June 24, 1913.

*Complaint.* Cramp-like pain in lower abdomen.

*Family History.* Father died of pneumonia following an operation for varicose veins; mother died following operation for appendicitis; two brothers living and well, no sisters.

*Past History.* Pertussis; dilatation and curettage in her home three weeks ago; otherwise always well.

*Menstrual History.* Onset when 14 years of age; always regular, every 4 weeks; flow normal in amount; not painful; duration 3 days; last period April 29, 1913.

*Marital History.* Married 4 years; one child 3 years old; no miscarriages. *Labor.* Normal. *Puerperium.* Normal.

*Present Illness.* For the past 9 weeks the patient has had cramp-like pains in the lower abdomen; these pains came at intervals, lasted a day, let up, and began again. Yesterday she had a violent attack of pain accompanied by vomiting; this was relieved by the administration of morphine. There were no headaches. Dyspnea was present on exertion. The bowels were regular.

*Physical Examination.* Negative except for the pelvic condition. Abdomen, well-marked tenderness and spasm over the left lower quadrant; this extends to the right quadrant, but is more marked on the left side. The vaginal examination is not remarkable except for tenderness in both lateral vaults. *Urination.* Some difficulty at micturition on account of pain. Urine examination negative. W. B. C. 22,000; R. B. C. 4,700,000.

June 25, 1913. The abdominal tenderness and spasm are much less marked today, and the patient is fairly comfortable.

June 27, 1913. The patient had a severe attack of pain lasting 2 hours this afternoon.

June 28, 1913. The abdominal spasm and tenderness have increased and the vaginal examination reveals marked tenderness and resistance in both lateral vaults. A small mass is felt on the right side.

*Diagnosis.* Ruptured ectopic pregnancy (right).

*Operation.* June 28, 1913. Dr. A. McK. Fraser. Gas-Ether. Right rectus incision; the peritoneum was blue and there was considerable free blood in the peritoneal cavity. The right tube was enlarged the size of an egg. The right broad ligament was clamped and the right tube and the right ovary were removed; the broad ligament was sutured with a running stitch of catgut; the blood clots were removed, and the abdomen was closed in layers.

*Pathological Diagnosis.* Ruptured right tubal pregnancy. The convalescence was uneventful and the patient was discharged well on July 11, 1913.

On December 8, 1913, the patient was again admitted to the Gynecological Service of the Carney Hospital, having been referred by Dr. John P. Treanor.

*Complaint.* Pain in the lower abdomen, cramp-like in character, flowing. The history up to the present illness is the same as given above.

*Present Illness.* The patient had a period on October 15, 1913, and started to flow again November 11, 1913, and has been flowing steadily until now; no clots have been passed. On November 30, 1913, at 3 a. m., she had severe crampy pains in the lower abdomen. Her physician administered morphin and the pain subsided. On December 6, 1913, she had another attack of pain much more severe in character; the patient claims that she had hot flashes; that she was covered with "clammy sweat," and that she almost fainted. She was given morphia again and was sent to the Carney Hospital where she was admitted at 10 p. m. There was no vomiting at any time although the patient was nauseated; she did not notice that she had passed any membrane while flowing. The history was otherwise negative. The vaginal examination revealed a small tender mass in the left vault.

*Diagnosis.* Ruptured ectopic pregnancy (left).

*Operation.* December 8, 1913. Dr. A. McK. Fraser. Right rectus incision resecting the old scar. The peritoneum showed a bluish discoloration; the peritoneal cavity contained a considerable amount of blood, both free and clotted. A ruptured tubal pregnancy was found on the left side. The left broad ligament was clamped and the left tube, the left ovary and the

products of conception were removed; the broad ligament was sutured with a running stitch of catgut. The abdomen was closed in layers after the removal of the blood clots.

**Pathological Diagnosis.** Tubal pregnancy. Cystic ovary. Chronic periovaritis.

The convalescence was uneventful and the patient was discharged on December 21, 1913.

*Interval between the two tubal pregnancies 5 months and 10 days.*

**CASE No. 2.** Mrs. L. H. Age 28. Born in Boston. Housewife. Seen in consultation with Dr. John F. Fennessey on March 14, 1917.

**Complaint.** Severe dysmenorrhea on the first day of her periods, backache and pain in both sides of the pelvis.

**Family History.** Both her father and mother died of pneumonia; otherwise negative.

**Past History.** Negative except for the removal of a small lipoma from the right breast.

**Menstrual History.** Onset at 14 years of age; regular every 4 weeks; duration 4 days; 2 napkins a day; small clots; very painful the first day, the pain consisting of bearing down and backache; last period February 23, 1917; previous period January 28, 1917.

**Marital History.** Married 7 years; 2 children; the older 5½ years old, and the younger 4 years old. No miscarriages. **Labor.** Normal. **Puerperia.** Normal.

**Present Illness.** Dysmenorrhea and backache since a fall two years ago this month. Sharp pains in both sides of the lower abdomen since last summer.

**Appetite.** Good. **Bowels** regular with the aid of laxatives.

**Leucorrhoea.** Slight. **Headaches.** Occasional frontal.

**Physical Examination.** Negative except for the gynecological examination. **Abdominal examination** negative. **Vaginal examination.** Considerable relaxation of the vaginal outlet, moderate cystocele and rectocele, cervix lacerated on the right side, uterus in third degree retroversion but movable, adnexa normal.

The patient was advised to have her lacerations repaired and with this end in view she entered the Carney Hospital.

On May 7, 1917, under gas-ether anesthesia, a right trachelorrhaphy, an anterior colporrhaphy and a colpoperineorrhaphy were performed by Dr. Phaneuf. The convalescence was satisfactory and on May 20, 1917, the day of her discharge from the hospital, the following note was made: The perineum is well healed and gives good support, the anterior wall is healed, the bladder is in good position, the uterus is in mid-pelvis, movable, and there are no sensitive areas in the pelvis.

On May 2, 1919, the patient had a slight attack of menorrhagia; this was easily controlled with small doses of fluid extract of ergot.

The patient was again seen in consultation with Dr. John F. Fennessey, in her home, on April 17, 1920, and the following history was obtained: Menstruation had last occurred on February 22, 1920, the duration being from 4 to 5 days; there had been no menstruation in March. Three weeks previously she had had a pain "like a bursting soreness" in the right pelvis; this subsided after the use of a liniment and taking of a physic. A week later, she had another similar attack of pain in the right side; this was accompanied by pain in the breasts; the pain was so intense "that she could not bear the weight of her clothing;" there was no flowing or morning sickness. Still a week later she had another attack of pain in the same region; this was accompanied by a little flow which she referred to as "spotting." She has flowed this week for 5 days, but the flow is now less than it was. Five days ago she had a great deal of "soreness" in the right

side; the pain was now referred to the right thigh and back; several large clots and numerous shreds, some as large as the little finger, were passed at this time. Two days ago she still had some soreness and some yesterday; today, there is much less pain.

**Examination.** Marked tenderness in the region of the cecum, rather higher than the tubo-ovarian region. Vaginal examination: the uterus is slightly enlarged and in third degree retroversion. There is marked tenderness in the right vault, although no definite mass can be made out; the left vault is negative.

**Diagnosis.** Ruptured extra-uterine pregnancy (right). The patient was sent to the Carney Hospital, where she was operated upon the same day (April 17, 1920) by Dr. Phaneuf. Gas-ether anesthesia. Median abdominal incision about five inches long, considerable blood free and clotted in the peritoneal cavity. The pregnancy was in the right tube, and because of an unusually long mesosalpinx the mass was extra-pelvic and in the region of the cecum. The right ovary was cystic, but the left tube and ovary appeared to be normal. The right broad ligament was clamped and the right tube, the broad ovary and the products of gestation were removed. The broad ligament was sutured with a running stitch of catgut. The uterus was in third degree retroversion, and since it did not stay in anterior position when brought up, it was suspended by the Olshausen method, using kangaroo tendon. The blood clots were removed and the abdomen was closed in layers.

**Pathological Report.** Tubal pregnancy.

The convalescence was uneventful and the patient was discharged from the hospital at the end of two weeks. Shortly after her arrival in her home she developed a mild phlebitis of the left leg which responded readily to treatment.

The patient was again seen on September 25, 1923. She stated that her last regular menstruation had occurred on the preceding August 1; on September 15 and 16 there was a little "spotting;" on September 17 she passed a clot and then flowed normally until September 24. At this time, the breasts were sensitive and a burning sensation in the thighs was present. She described these symptoms as being the same as those which occurred with her right extra-uterine pregnancy.

**Examination.** The breasts and nipples appear to be normal. The abdomen is negative except for a well healed median incision. The vaginal examination is negative except for the fact that the uterus is somewhat enlarged. There are no signs of pregnancy or recent miscarriage. She reported again on October 19, 1923; she then mentioned that she had flowed three times in five weeks, August 1, 3 to 4 days; September 15, 7 to 8 days, and passing a clot at this time; she had started to flow again on October 18, and was flowing at the present time. She was ordered to bed and treated expectantly until the flowing stopped at which time she was examined again, this taking place on October 23, 1923.

**Examination.** Abdominal, marked tenderness over the left tubo-ovarian region. Vaginal, uterus enlarged, slight flowing; there is a small mass on the left which is exquisitely tender.

**Diagnosis.** Extra-uterine pregnancy (left). The patient was referred to the Carney Hospital where she was operated upon on October 23, 1923, by Dr. Phaneuf. Median abdominal incision resecting the old scar; upon reaching the peritoneum, this structure had a bluish tint; there was considerable free blood in the peritoneal cavity. The tube was the size of a small egg, and the products of gestation were found near the fimbriated extremity and partly extruded (incomplete tubal abortion); since the left ovary was cystic, it was removed with the left tube and the products of gestation. The broad ligament was sutured with a running stitch of catgut, the

blood clots were removed, and the abdomen was closed in layers.

*Pathological Report.* Tubal pregnancy.

The convalescence was satisfactory and the patient left the hospital at the end of 15 days. She was examined at the writer's office on November 16, 1923, and the following note was made. Incision well healed. Uterus in position, lateral vaults clear, no masses or areas of sensitiveness in the pelvis.

*Interval between the two tubal pregnancies 3 years, 6 months and 8 days.*

CONCLUSIONS

1. Repeated tubal pregnancy is a condition which occurs not infrequently in women who have been previously operated upon for extra-uterine gestation.

2. The lesion should be given consideration when a woman who has had a previous operation for tubal pregnancy develops pelvic pain, and gives a history of irregular flowing.

3. The literature shows that the percentage of normal uterine pregnancies is greater than repeated tubal pregnancies in women who have been previously operated upon for ectopic gestation.

4. In a considerable experience with extra-uterine pregnancy on the Gynecological Service of the Carney Hospital, we have found this condition but twice in a period of ten years.

5. We believe that when operating for ectopic gestation the adnexa of the opposite side should be removed only if diseased, and that they should not be removed, even then if the patient has had a severe hemorrhage.

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ABDOMINAL HYSTERECTOMY UNDER MORPHINE, SCOPOLAMINE, AND LOCAL ANESTHESIA

The *American Journal of Obstetrics* for December, 1923, has published an article by Dr. F. C. Irving in which he reports that thirty-one cases have been operated on in the Boston Lying-In Hospital by this method.

IS INSULIN REALLY MORE IMPORTANT TO THE AVERAGE DIABETIC THAN FOOD-SCALES?

BY H. GRAY, M.D., BOSTON

[From the New England Deaconess Hospital, Boston]

THE wonder of insulin has resurrected the human wishful belief in a complete and quick cure for diabetes. But experts agree that insulin is neither a cure nor a mere brief temporary treatment, except in acute infections and surgical emergencies which concern only a fraction of patients. Hence it is desired to urge both physicians and patients to face frankly the fact that, all things considered, not even insulin is more important than food-scales. This is indeed a rather strong statement, but is believed warranted by the following considerations:

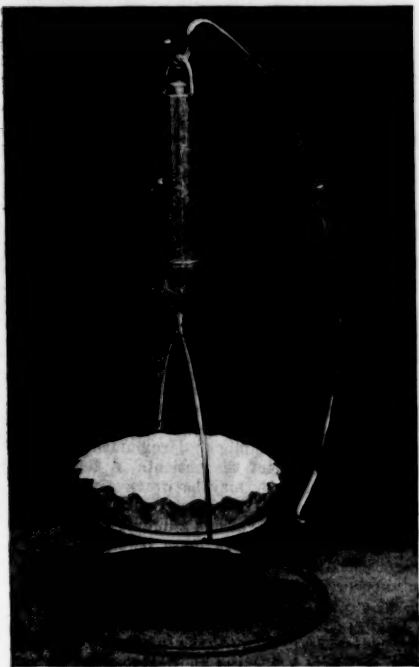
1. Banting himself has admitted that "by dieting alone probably 80 per cent. of diabetics may be kept well nourished without the use of insulin."

2. Experts agree that insulin without measured diet is wasteful or even futile. Illustrative cases have been recently reported by Joslin<sup>1</sup> and by Brigham.<sup>2</sup>

In other words, four-fifths of diabetics need no insulin, and the remaining one-fifth are likely to receive small benefit from insulin unless they measure their food intake. Insistence by the profession on increased accuracy of measurement has been a sluggish development, owing to the labor asked of the patient. A few high points in the history may be worth review, for though quantitative diets have been put on record sporadically by various students in various countries, nowhere has a more persistent campaign been waged to teach patients the inevitability of making actual measurements, than in this clinic.

Twenty-five years ago Joslin wrote: "Doctor and patient must know the amount of food taken and have a working knowledge of its three constituents. . . . This does not mean theoretical but practical study. . . . Really an interested intelligent cook is of more value to most diabetics than a trained nurse."<sup>3</sup> Later he returned to the attack with the phrase, "Substitution of Facts for Guess Work."<sup>4</sup> Fifteen years ago he and Goodall<sup>5</sup> published a blank form of diabetic chart with columns for C-P-F-Calories, shortly afterward<sup>6</sup> reporting a case with the actual weights of the food items and the total grams of carbohydrate calculated from them, and again a little later<sup>7</sup> for another case specifying the total grams given, not only of carbohydrate but also of protein and fat. An explicit example of the feasibility of calculating the C-P-F and calories from the weights of the food items, together with a scheme to facilitate the

memorizing of a few of the essential foods, was published in Joslin's first extensive monograph on diabetes, in Hare's Treatment.<sup>9</sup> Elaboration of this scheme has been a pre-occupation ever since, his latest recommendation being a card, bearing on one side the few food values mentioned above, and on the other side the most recent modification of his test<sup>10</sup> and maintenance diets.<sup>11</sup> This outline can be applied by any physician to any patient, and makes only slight demands on his discretion and time. If it



be permitted to use a pungent common colloquialism, but in its most respectful sense, the scheme may be called "fool-proof."

For the patient to pursue the physician's outline the necessary provisos are two: determination and a really convenient food-scale. The latter finally resulted from the efforts of the manufacturers, and since 1916 has been a subject of persistent propaganda.<sup>12</sup> It is a spring scales with a movable dial which can be set at zero after an empty dish is put on.<sup>13, 14</sup> When food is then placed in the dish, its weight is indicated directly, without the necessity of subtracting for the dish. "Such scales reduce the labor of weighing 90 per cent.," compared with the small balance scales which are usually seen

in grocery stores, and whose slow use is responsible for many patients' reluctance to weigh their food.

An illustration of this scales need hardly be reprinted here, because (1) it looks like so many letter scales, (2) it has been published a number of times in the medical press, both in this country and abroad,<sup>15</sup> and (3) it has been distributed in such large degree, for example more than six hundred in the past year from this clinic alone.

The cut herewith shows a new Travelers Food Scale, just made available in July.<sup>16</sup> This portable spring balance has a total of 150 grams



graduated by five grams. The little plates are of heavy paper. It sells for about \$9 without the leather case, \$15 with. What a patient expends on scales he will save in doctor's bills and in health.

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## PUBLIC HEALTH AND PUBLICITY

BY A. P. MERRILL, M.D., PITTSFIELD, MASS.

STYLES are undergoing rapid and radical changes. The mode of living has during the past few years completely altered, the variations being rapid, though imperceptible from day to day; thought has followed entirely new channels, and our relations to our fellowmen have taken on new forms of expression. The medical profession must keep pace with these changes or suffer the natural consequences. We must find a way of reaching a better understanding with the public on matters pertaining to health. In studying this problem one is promptly confronted with the question—"What is public health?" It is difficult, if not impossible, to express in a definition of reasonable length what we understand by this term. Fortunately, we are not called upon to be scrupulously accurate in defining a border line, but should work in any field that will presumably improve the health of the public. Increased wealth sometimes begets extravagance; increased knowledge may beget carelessness. No one will accuse the medical profession of increased wealth, but we have increased our knowledge of the treatment of disease, and more especially of preventive medicine, so rapidly during the past fifty years that we have been careless about keeping our house in order. The tendencies toward state medicine, toward too much legislative meddling with the care of the unfortunate, failure to safeguard the public from quacks, failure to make full use of the agencies for preventive medicines that are at our disposal, and many similar tendencies, are strenuously favored by a small coterie of so-called reformers. These people are so active in personal solicitation, speech-making, and through the press, that they start many people asking questions, and we have been too busy following our traditions of conservatism and aloofness to supply them with answers. Surely the records of accomplishments by the medical profession and the efforts we are far too quietly, even though energetically, making for the im-

provement of health conditions should make satisfactory answer to these questions.

While the muddled lambasting leagues, the anti-everything groups, and the numerous cults are attacking from various points of vantage, what is the medical profession doing to maintain that truly wonderful edifice of knowledge so painstakingly erected by the very unselfish efforts of its best trained minds through many years?

During the past two or three years some of the State Medical Societies have studied the problem of increasing their usefulness to the public stimulating a desire for better health, and teaching the public how that goal may be approached.

The American Medical Association has appointed a committee to study and report on this problem. In the interim they are developing a program of carrying diagnostic clinics to each District Society. Their Secretary enthuses over the importance of this work, but urges that we go slowly, thoroughly studying the problem in our locality, as it varies in each State. He warns against carelessness in preparing articles for the press, as our opponents are apt to seize upon a sentence, or part of a sentence, and make such use of it as might do much harm. He also warns against too much effort spent in advocating diversified legislation. Better concentrate on improving the standard of requirements for registration.

In Maine especially fine work has been done. The Maine Anti-Tuberculosis Association, not satisfied with its results, reorganized, joining with a "Committee of Public Health Relations" from the State Medical Society to form a Public Health Association. They adopted "A Health Plan for Maine" with a developing program extending over three years, beginning January 1, 1922. Their slogan is, "Health Service to the People of Maine." They offer assistance in the discovery of physical defects that may be remedied, and assistance in the prevention of preventable diseases and accidents. They plan to develop a local health organization in each district of the State. On their managing committee they have a representative from the State Board of Health, the State Federation of Women's Clubs, State Grange, State Federation of Labor, American Legion, Associated Industries, and the State Chamber of Commerce. They employ a full-time organizer, a secretary, and a publicity agent.

In the West, the Far West, and in the South, considerable excellent work has been done along this line, while the section usually expected to set the advanced standard in education has waited. Three years ago the Washington State Medical Society formed a separate organization known as the Public Health League. They selected a lay secretary, who attended the 1921 session of the Legislature "where he found the health situation anything but good, and the poli-

ticians skeptical as to the ability of the physicians to get together on legislative matters. Today the League is a recognized force in the State and is looked to for guidance in matters affecting the public health by both laymen and physicians." The State Dental Association joined with them, and later a vigorous and well-advertised campaign was carried on to gain lay members. They publish a monthly bulletin describing their activities, employ two secretaries, one of them trained in newspaper publicity, and have regular health columns in sixty newspapers of their State. One of the large life insurance companies has helped finance their printing bills, especially for pamphlets, of which they have distributed several thousand.

In Oregon the work is patterned after California, one of the pioneers of this work. They formed a league for the conservation of public health, having interlocking directorates with the State Medical Society. The league employs a full-time secretary, who is experienced in publicity work. They publish a monthly bulletin and have distributed a great many pamphlets. The State Medical Society charges annual dues of \$20, one-half of which is devoted to the work of the league. An auxiliary department was formed, including the State Dental Association, the pharmacists, nurses, and all laymen in any way connected with public health work, the dues for the auxiliary being normal.

In the South, Texas and Georgia are the shining examples. The Texas Medical Society formed a committee on education, including in its membership the chairmen of some of their standing committees, such as the committee on cancer, preservation of vision, study of venereal problems, legislation, and especially the committee on organization. This large committee formed a sub-committee for each councillor district, with the councillor in charge, and these committees are expected to adapt the work to local conditions. They have found public lectures the most valuable way to spread the gospel of health, and particularly so when the lecture is given from the pulpit of a church, where their speakers draw freely on the Bible and the Talmud for texts and health rules. Their greatest difficulty is to find the right person to give the lectures, as according to their experience, the one who could give the best lecture in the medical school class room is often a failure when he tries to interest the public.

The Georgia Medical Society is developing a rather extensive program of diagnostic clinics carried to the outlying districts. The president of that Society appealed to the Savannah Board of Trade to call a convention, inviting the mayors, city councils, local health departments, physicians, newspaper editors, civic clubs, labor organizations, and anyone especially interested in public health work to attend. From this

conference they hope to develop an organization which will endeavor to obtain more liberal appropriations for public health work, legislation to protect the people of the State against medical practice by the unqualified, and the better dissemination of helpful information about diseases and their prevention or control. The State Medical Society assumes leadership of this movement and will be the directing force.

After a year of careful study, the Iowa Medical Society formed a "Field Activities Committee," composed of their president-elect, two members of the Society chosen by the council, one member of the Society chosen by the State Board of Health, one member of the Society chosen by the State University Medical School, one delegate from the State Anti-Tuberculosis Association, and one delegate from the State Conference of Social Work. Their chief objective is to promote "Adequate, efficient, and equitably distributed medical service throughout the State." Their method is first to promote organization of county societies, second, to stimulate activity of such societies along public health lines, and, third, to effect coöperation between the county societies and other organizations of the community. The State Medical Society appropriated \$7500 for the first year, but expects to develop some other way of financing for the future. It employs a secretary and publicity agent.

The Indiana Medical Society has appointed a committee to develop a bureau of public information, and has appropriated \$7000 for the work of the first year. It employs a full-time secretary, preferring one trained in publicity work, though he be a layman. They are moving very slowly, feeling that caution should be the watchword for a time, while carefully studying results of the tentative program. They intend to expose the cults and frauds while carrying on their educational work. All articles published by them are signed by the bureau rather than by authors.

The Illinois Medical Society appointed a lay educational committee that solicited from members of the Society funds to carry on this work, and when one thousand members had contributed sufficient money to warrant a start a director of publicity was appointed and a speakers' bureau organized. This committee appointed a "physician-contact" in each of their ninety-nine districts, whose duties shall be to assist in local organization work and in placing news stories in local papers. The aims of this committee for the first year are: 1. The classification and centralization of the resources of the Society with reference to publicity. 2. The establishment of general publicity media for news and feature material. 3. Enlistment of the active coöperation of county societies, in order to make the campaign the affair of every doctor rather than of a committee. The presi-

dent of the State Society has become so interested in this campaign that he has, at his own expense, published a pamphlet explaining what the cults are and what should be done about them, and several copies have been distributed throughout the State.

The Michigan Medical Society is doing excellent work through a Joint Committee on Public Health Education, which is the leader and guiding spirit. This joint committee is composed of seven representatives from the State Medical Society, five representatives from the Medical Department of the University of Michigan, one from the State Department of Health, one from the Detroit College of Medicine and Surgery, and one from the State Dental Society. Quoting from a bulletin distributed by the University Press: "The function of this Joint Committee is to present to the public the fundamental facts of modern scientific medicine for the purpose of building up sound public opinion relative to the questions of public and private health. It is concerned in bringing the truth to the people, not in supporting or attacking any school, sect, or theory of medical practice. It will send out teachers, not advocates." Last year through its speakers' bureau this committee reached 26,000 people through 196 health lectures, and they are planning a much more ambitious program for this year. At each lecture special literature is to be distributed relating to the subject of the lecture, and much of this, plus several notices about the meeting, is placed in the local papers by the full-time publicity agent employed by the committee.

The Massachusetts Medical Society should leave the ranks of the trailers and take its rightful place among the leaders. To do this it will be necessary to develop a definite program, which should start with a careful survey of present conditions and possibilities, so building a good foundation on which we should then endeavor to raise a substantial superstructure. Undoubtedly it is far better to move very slowly rather than hurry and make mistakes, but the all-important thing is to make a start and follow this with sustained effort.

The following program has many points in its favor:

1. The formation of a Bureau of Public Instruction, composed of five or more councillors, one of whom shall represent the JOURNAL and one to be selected by the State Department of Health.
2. The Bureau to employ a full-time secretary, preferably one who has had experience in publicity work.
3. The secretary, with the supervision and cooperation of the members of the Bureau, to make a survey of present conditions throughout the State and of the resources of the Society adaptable to this work.
4. Develop a program, starting very cau-

tiously and gradually working up to a comprehensive plan of endeavor.

5. Offer this tentative program for discussion through the JOURNAL, and when fully developed, subject to such changes as may be indicated as the work develops, report to the Council.

6. While this work is going on the secretary is authorized to place in the newspapers of the State such news and feature articles as are available, these to be signed by the Bureau in order that there shall be no suggestion of personal propaganda.

Following the above program would, at least, be making a start in what seems to be the right direction, and would be a substantial foundation for such development as seems best as the work progresses. We must keep ever in mind that this work is educational throughout, and so far as possible avoid all controversy. To be sure, "in a democracy the public health is a public concern," but even more so, is it the concern of the medical profession. We owe it to the public and to ourselves to be the leaders in this movement, and so head off the tendency toward state medicine, which would be contrary to the best interests of both groups.

It has been well said that "Printers' ink is saving more lives than any other single agency employed by modern health workers," and we should make use of a large amount of that ink, always realizing it is an extremely dangerous weapon when carelessly used.

#### CONCLUSIONS

There is a definite indication for the Medical Societies to instruct the public in health matters.

The State Medical Societies that have tried it have attained considerable success through the employment of publicity agents, lecture bureaus, and the distribution of pamphlets.

The Massachusetts Medical Society should be among the leaders in this movement, following a survey of present conditions by a gradually developing program of effective educational work.

#### RESEARCH FELLOWSHIP FOR THE STUDY OF CARBONATED BEVERAGES

ESTABLISHMENT of a research fellowship at Iowa State College, Ames, Iowa, by the American Bottlers of Carbonated Beverages, with the object of improving the quality of carbonated beverages, commonly known as soda water, is being greeted with the heartiest approval and commendation by experts on food production, including the U. S. Government officials engaged in advisory and regulatory work in connection with the Pure Food Laws. It is also the subject of much favorable comment in magazines presenting the best thought in industrial and scientific circles.

**Case Records**  
of the  
**Massachusetts General Hospital**

ANTE-MORTEM AND POST-MORTEM RECORDS AS USED IN  
WEEKLY CLINICO-PATHOLOGICAL EXERCISES

EDITED BY  
RICHARD C. CABOT, M.D., AND HUGH CABOT, M.D.

F. M. PAINTER, ASSISTANT EDITOR

CASE 100416

An unmarried Irishwoman of thirty-five, doing housework at home, entered November 24.

F. H. Her father died of heart disease, her mother of cerebral hemorrhage.

P. H. She had whooping cough, scarlet fever, measles and croup when a baby.

P. I. In September she began to have trouble with her stomach, was slightly upset, uncomfortable and weak, with some gas. For the past few weeks she had been getting short of breath and could not go upstairs without stopping. Two weeks ago she had considerable edema of the legs, which had cleared up. She urinated once at night.

P. E. Well nourished. Skin slightly dusky. Hands, feet and lips cyanotic. Teeth poor and neglected. Pyorrhea. Apex impulse of the heart in the fifth space, nipple line, four and a half inches to left of midsternum, corresponding with the left border of dullness. No enlargement to the right. Action irregular, somewhat rapid. Sounds of good quality. Second sound impure, simulating a murmur. P, greater than A. Pulses of fair volume, normal tension. Artery walls normal. B.P. 120. Lungs. Dullness from midscapula to base on the right, from just below inferior angle of scapula to base on the left. Diminished breathing over these areas, especially on the right, at the right base somewhat high pitched, with fairly numerous fine crackling and medium moist râles accompanying inspiration. Dullness from just below armpit to base in right axilla. Abdomen. Liver dullness from the sixth space to four inches below the costal margin. Edge felt. Extremities. Considerable soft edema of left leg. Right leg smaller and showed depression of skin from bandage. Dilatation of superficial venules of legs. Pupils very slightly irregular, otherwise normal. Reflexes. Knee-jerks normal.

T. 95.9°-100.9°, with a terminal rise to 102.3°. P. 60-92, with one drop to 48 January 4 and a terminal rise to 124. R. 19-40. Urine.  $\frac{1}{3}$  7-30.

Sp. gr. 1.011-1.023. Cloudy at eight of ten examinations, alkaline at the last, a very slight trace to a large trace of albumin at nine, a few to rare red blood cells at two, a few to many leucocytes at nine (the tenth was unsatisfactory because of fecal contamination.) Blood. Hgb. 100 per cent., leucocytes 17,200, reds 8,258,000 falling to 6,600,000 by December 31 and to 4,800,000 January 18. Wassermann negative. Sputum. Much blood at two of four examinations, very little at one, streaked at one.

The night of admission the patient had several attacks of tension in the epigastrium and the lower left chest near the precordia associated with vomiting of thick mucus. Next day she felt better, her color was improved, and her pulse stronger, though still very irregular and of poor quality.

November 30 a chest tap gave 1900 c.c. of clear orange colored fluid; sp. gr. 1.008, alkaline, albumin 3 per cent., cells, 68 per cent. endothelial, 24 per cent. lymphoid, 8 per cent. polynuclear. Culture and guinea pig test of the fluid proved to be negative.

The patient was troubled with insomnia, with slight dyspnea, and with an occasional feeling of oppression over the liver. She gained strength, and by December 7 had no more dyspnea. For some days there had been a purulent vaginal discharge and several superficial ulcers on the vulva which yielded quickly to treatment with argyrol. A vaginal smear showed no gonococci. X-ray of the chest showed nothing remarkable. Digitalis was started, but had to be discontinued on account of vomiting. Rectal examination showed a somewhat congested mucosa. She now made steady improvement for eleven days. After sitting up on the porch, however, she had slight cardiac symptoms and vomited. Fluid rapidly accumulated at the right base. December 22 1700 c.c. of fluid was withdrawn with considerable relief. There had been no cyanosis for some time. After this she did not do so well. By December 26 there was some dullness at both bases and edema around the buttocks and ankles.

December 29 she had considerable dyspnea with dull pain in the right abdomen. There was great relief after withdrawal of 1750 c.c. of clear amber fluid from the right chest; slight flocculent clot; sp. gr. 1.009, neutral, albumin 1.3 per cent., 84 per cent. small lymphocytes, 7 per cent. endothelials, 9 per cent. polynuclears, a few red cells.

The edema increased. January 1 a chest tap gave 1700 c.c. of similar fluid. The condition grew gradually worse. She vomited and occasionally had attacks of coughing. There was marked dyspnea only when the chest was full. The pulse was usually irregular. She made no improvement under digitalis or strophanthin and did not react to diuretin. The edema of the



legs and back increased. The lips and cheeks were high colored. There was marked ptosis of the right kidney. For a few days the dyspnea and vomiting were less. January 6 1100 c.c. of clear amber fluid was removed from the right chest showing a high percentage of large endothelial cells, many with two or three nuclei. There now seemed to be considerable fluid in the left chest, with dullness below the angle of the scapula. The general condition was better than when she was on digitalis and strophanthin. January 7 the left chest was tapped. Only 150 c.c. of fluid was obtained. For the next three nights she was delirious and noisy. She continued to vomit. The edema of the legs had cleared. January 12 at a right chest tap 750 c.c. of cloudy yellow fluid was withdrawn, similar in character to that of the previous taps.

January 15 the pulse became very weak. She was given strophanthin with some improvement and next day the pulse was much stronger. That day she had slight hemoptysis. She complained of coldness and pain in the feet. January 18 there was beginning gangrene of the toes of both feet. The pulse could not be felt in the feet, knees or groins. She was irrational and very weak. She continued to cough up a little blood. The apex of the heart was inside the nipple line. There was marked presystolic gallop rhythm. The right chest showed dullness with diminished breathing and a few crackles. January 19 she died.

#### DISCUSSION

BY DR. RICHARD C. CABOT

#### NOTES ON THE HISTORY

We start fair on the present illness with nothing significant behind us. We have apparently a circulatory case, with dyspnea and edema the presenting symptoms in a woman of thirty-five.

#### NOTES ON THE PHYSICAL EXAMINATION

There is no proof here, that I see, of enlargement of the heart. They were not ready to come down one side or the other as to the murmur. We have nothing in the heart so far that will make us sure that it is the cause of the symptoms.

There is fluid in both chests, passive congestion of the liver, edema of the legs. So that we have evidence of passive congestion of the lungs, liver and legs, but without, so far, any good cause.

There is nothing definite in the urine,—mere passive congestion of the kidney.

The red blood corpuscles fell within a month from eight millions to six and in another month to four.

The bloody sputum would probably be explained by passive congestion with infarct. It is obvious that we have passive congestion everywhere. The cause of it is not clear to me yet.

Nineteen hundred c.c. is a large amount for one tap. It looks like an ordinary dropsical fluid.

X-ray showed nothing either in the lungs or the heart.

#### DIFFERENTIAL DIAGNOSIS

This is a very mysterious case. I do not know the diagnosis. She evidently had tremendous passive congestion and at the end gangrene of both feet, which seems to mean a thrombosis of the abdominal aorta or of both femorals. But what is it all secondary to? Certainly nothing in the lungs. We had a good x-ray of them, and nothing could be found except passive congestion. Can it be any local abdominal lesion holding the diaphragm high and producing dyspnea in that way? I do not see how it can. We have a good examination of the abdomen.

I think the primary trouble must be the heart, although we have not the evidence. It seems to me it must be cardiac dropsy and a cardiac case. I never knew a cardiac case to die at this age with so little to show for it in the examination of the heart. There is certainly no evidence of valve lesion or of hypertension. We might guess it was myocarditis, but we never have definite evidence of that. The heart was not irregular until towards the end, never enlarged.

So that I can make no diagnosis except general circulatory failure and passive congestion, probably of cardiac origin, but the lesion unknown.

A PHYSICIAN: How do you explain the change in the blood picture from eight to four millions?

DR. CABOT: That is a good question. We might presumably have the eight millions of red cells from peripheral cyanosis. The cyanosis later got less. Perhaps that is all there is to say.

If there was much fluid in the pericardium it would show. We have not at all the picture of an adherent pericardium so far as we can diagnose it. That gives the evidence of a very much enlarged heart; this is not enlarged. She has no good reason to die, as I see it, unless the heart were dilated, which it does not seem to be.

The simplest explanation is that the physical examination was wrong and that there were all sorts of things that we should have heard in the heart. But that is a little too simple.

A PHYSICIAN: Could an abdominal tumor pressing on the blood vessels produce such symptoms?

DR. CABOT: I think not, because there is so much evidence of trouble above the waist.

## CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Fibrous myocarditis with mural thrombi.  
Pulmonary infarcts.  
Hydrothorax.  
Anasarca.  
Chronic passive congestion, general.  
Polycythemia.  
Gangrene of legs.  
Mental disturbance.

## DR. RICHARD C. CABOT'S DIAGNOSIS

General circulatory failure.  
Thrombosis of the abdominal aorta.  
Chronic passive congestion.

## ANATOMICAL DIAGNOSIS

## 1. Primary fatal lesions

Chronic interstitial myocarditis.  
Mural thrombi in all the cavities of the heart.

## 2. Secondary or terminal lesions

Septicemia, streptococcus.  
Serosifibrinous pleuritis, double.  
Thrombosis of a great branch of the left pulmonary artery.  
Infarcts of the lungs.  
Thrombosis of the abdominal aorta.  
Thrombosis of the left renal artery.  
Infarcts of the kidneys.  
Hypertrophy and dilatation of the heart.  
Chronic passive congestion, general.  
Edema of the legs and feet.

## 3. Historical landmarks

Chronic pleuritis, right.  
Obsolete tuberculosis of the bronchial lymphatic glands.  
Cholelithiasis.  
Cystic ovaries with chronic pelvic peritonitis.  
Small fibromyoma of the uterus.

DR. RICHARDSON: The head was not examined. The legs and feet were slightly swollen and pitted on pressure. The subcutaneous fat was small in amount and the muscles thin and pale.

The anterior margin of the right lobe of the liver was 4 cm. below the costal border. The diaphragm was at the fifth interspace on the right and the lower border of the sixth rib on the left.

Each pleural cavity was half full of thin cloudy fluid supporting flakes of fibrin. The right lung showed old adhesions in the region of the apex and some to the diaphragm and pericardium. The left lung was free. The bronchial glands were slightly enlarged, and several of them showed small fibrocalcereous areas,

—obsolete tuberculosis. The tissue of the lungs generally was a little leathery, salmon colored, and yielded a moderate amount of brown-red frothy fluid,—chronic passive congestion. The visceral pleura in several places was coated with a thin layer of fibrinous material. In each lung there were several typical infarcts about 4 cm. across.

A large branch of the pulmonary artery within the tissue of the lower lobe of the left lung, leading to an infarct, was occluded at its bifurcation by an adhering thrombotic mass portions of which projected into each branch of the bifurcation.

The heart weighed 420 grams,—moderate hypertrophy. The cavities showed some enlargement, but the valves were negative. The coronary arteries as far as dissected were negative. In the right auricular appendix there was a frank adhering thrombus  $2\frac{1}{2}$  cm. by 1 cm., and in the region of the apex of the right ventricle and along the interventricular septum there was much adhering thrombotic material. In the left ventricle also, beginning in the region of the apex and extending up along the interventricular septum, there was another large adhering thrombotic mass. In the left auricular appendix there was still another adhering thrombotic mass 2 cm. by 5 mm. The heart walls beneath these thrombi showed diffuse fibrous myocarditis.

The aorta was not remarkable until the abdominal portion was reached. Here, attached in this region to the intima, there was a frank mass of thrombotic material just above the celiac axis extending down along the left lateral wall to a point just below the left renal artery. The margin of this thrombus rested along the openings of the celiac axis and superior mesenteric arteries, but the thrombus did not extend into them. From the lower border of this mass a large cylindrical thrombus extended down along the aorta to its bifurcation, where tapering thrombotic prolongations extended into the common iliac arteries. This thrombus was adherent to the intima of the aorta and the ilia in several places.

The right renal artery was free, but the left renal artery was completely occluded by a firmly adherent thrombotic mass. The walls of the aorta and the great branches in the region of the thrombi showed some fibrous thickening and degeneration of the intima, but no evidence of syphilis.

The liver weighed 1225 grams and showed chronic passive congestion. The gall-bladder contained six small stones, the largest measuring 3 cm. by 2 cm. The mucosa of the gall-bladder was negative. The bile ducts were free and the pancreas and duct of Wirsung negative.

The spleen weighed 95 grams,—small. The tissue was dark red and of rubbery consistence—congested.

The right kidney weighed 170 grams. The capsule stripped, showing slight adhesions over areas of infarction in the kidney. The tissue was firm and the markings outside of the areas of infarction were retained. The cortex measured 7 mm. In many places the kidney tissue showed smaller and larger frank infarcts. The left kidney was small and the capsule more or less adherent. There was but little remaining kidney tissue, and the organ was largely composed of discrete and confluent masses of infarction.

In each ovary there was a cyst about 4 cm. in diameter. They were bound to the posterior wall of the uterus and rectum by old adhesions. The uterus presented a small subperitoneal fibromyoma.

The gastro-intestinal tract showed some reddening of the mucosa.

The culture from the heart blood yielded streptococci.

#### EPICRISIS (DR. CABOT)

Now and then in a young or middle-aged woman we see a case like this—cardiac failure without an identifiable cardiac lesion in life, but showing fibrous myocarditis at necropsy. My guess is that it was the thrombi and their results rather than the myocarditis that produced most of the physical signs here.

#### CASE 10042 •

AN Austrian seamstress of seventeen entered November 19.

F. H. and P. H. Not recorded.

P. I. She was well until three weeks ago, when her legs and arms began to swell. She worked until the night before admission. Then she began to have cough with sputum and dyspnea.

P. E. A well-developed girl with extreme brawny edema of the legs and arms, rapid, grunting and labored respiration, cough with every two or three breaths, and bright pinkish-red frothy sputum which at times nearly ran from her mouth. Face pale, cyanotic and swollen. Hands very cyanotic. *Lungs.* Dullness at both bases behind, slightly more marked on the right. Very moist bubbling râles, so numerous and loud that they could be heard without the stethoscope. Breath sounds obscured. Spoken voice diminished at bases. Apex impulse of the heart in the fifth space, nipple line, corresponding with the left border of dullness. Right border at right sternal margin. Action very rapid. Sounds practically obscured by râles. A,

greater than P<sub>2</sub> (†) Pulses very rapid, of greatly increased tension (180-200, estimated without instrument). *Abdomen* rather prominent in lower half. Enlarged liver. *Extremities.* Extreme brawny edema of the lower extremities and arms. *Genitals, pupils and reflexes* not recorded.

T. 99.8°. P. 140. R. 36. *Urine.* Amount not recorded. Sp. gr. 1.014. Albumin ½%, a few red blood cells and leucocytes, many hyalin, granular and cellular casts. *Blood.* Hgb. 80%. Leucocytes 27,000; polynuclear leucocytosis.

Venesection was immediately done and ten ounces of blood removed with considerable temporary relief. The râles cleared up to a large extent for a time. The patient was so restless that a sixth of a grain of morphia was given. After this the respirations became very slow, of the air-hunger type, and she was unconscious. .0005 strophanthin was given intravenously without effect. Soon after midnight she died.

#### DISCUSSION

BY DR. RICHARD C. CABOT

#### NOTES ON THE HISTORY

There is in all probability some history of an infection preceding the present illness and probably of other symptoms which the patient's nationality and the storminess of her recent symptoms prevented her remembering. At the present time the symptoms are those of a cardiac or renal disease with extreme pulmonary edema.

#### NOTES ON THE PHYSICAL EXAMINATION

The physical examination makes it very nearly certain that the disease is renal rather than cardiac, because of the increased blood pressure and the absence of demonstrable murmurs. The heart is a good deal larger than would be indicated by the measurements given. The urine is that of an acute or chronic nephritis.

#### DIFFERENTIAL DIAGNOSIS

From the absence of anemia it seems more probable that the trouble is acute or subacute. Nothing is said of cardiac arrhythmia or of the development of any further cardiac signs after the râles have cleared up. The character of the respiration is much more like uremia than like ordinary cardiac dyspnea. Above all, the rapidity of the march of symptoms leading to death in three weeks, though without evidences of an acute infection or acute endocarditis, points away from heart trouble and towards nephritis. On the whole the most probable diagnosis

seems to be subacute glomerulonephritis with hypertrophy and dilatation of the heart and general passive congestion.

#### CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Acute nephritis.  
Acute pulmonary edema.  
General passive congestion.

#### DR. RICHARD C. CABOT'S DIAGNOSIS

Subacute glomerulonephritis.  
Hypertrophy and dilatation of the heart.  
Chronic passive congestion, general.

#### ANATOMICAL DIAGNOSIS

##### 1. Primary fatal lesion

Subacute glomerulonephritis.

##### 2. Secondary or terminal lesions

Hypertrophy and dilatation of the heart.  
Chronic passive congestion, general.  
Hydropericardium.  
Hydrothorax.  
Slight ascites.  
Edema of the lower extremities.

##### 3. Historical landmarks

Obsolete tuberculosis of the bronchial lymphatic glands.

DR. RICHARDSON: The head was not examined.

The legs and feet were swollen and pitted on pressure.

In the peritoneal cavity there was a moderate amount of pale clear fluid.

The diaphragm on the right was at the fifth rib and on the left at the fifth interspace.

Each pleural cavity was about half full of pale thin clear fluid. Two of the bronchial lymphatic glands showed fibrocalcereous degeneration,—obsolete tuberculosis. The trachea and bronchi contained a moderate amount of reddish frothy mucus and the mucosa generally was brownish red. The apices of the lungs were negative. There were no areas of consolidation. The tissue generally was somewhat leathery, of dark salmon color, and yielded a considerable amount of frothy brownish red fluid, chronic passive congestion.

The pericardium contained considerable thin pale clear fluid, but was otherwise negative. The heart weighed 280 grams, slight hypertrophy. The cavities showed moderate dilatation and the valves and coronary arteries were negative. The

aorta, venae cavae, pulmonary artery and veins were negative.

The liver weighed 1425 grams. Its anterior margin was 8 cm. below the costal border in the right mammillary line. It showed chronic passive congestion.

The spleen weighed 160 grams. (Normally 80-180.) The tissue was firm, elastic, and dark red in color,—congestion.

The combined weight of the kidneys was 250 grams. (Normally 200-400.) The tissue was firm, the markings were made out, and the cortex measured 6 mm. The section surfaces showed congestion and the glomeruli generally were very prominent.

The gastro-intestinal tract showed some reddening of the mucosa but was otherwise negative.

The case anatomically presents a typical picture of subacute glomerulonephritis with hypertrophy and dilatation of the heart and chronic passive congestion.

#### CASE 10043 O

*First entry.* A Greek of twenty-seven was sent December 23 from the Out-Patient Department. He spoke very little English. He stayed all night in the hospital, then left against advice, expressing a determination to go back to Greece at once.

*Second entry.* January 3, ten days later, he returned.

F. H. Unimportant.

P. H. Negative except for pneumonia at twelve.

*Habits.* He was a steady drinker of whiskey, beer and wine. He had not been drunk for three months. He denied venereal disease.

P. I. About a month ago he felt some pain in the liver region and noticed a considerable mass, which had been growing larger ever since. He had had pain in this region daily. For two weeks he had been unable to work. He now could not sleep. The pain lasted two or three hours at a time and was worse at night.

P. E. Well nourished. *Heart and lungs* normal. *Abdomen.* Considerable bulging of the lower ribs on the right. A dull mass extended from the fourth costal space to a line level with the umbilicus on the right and over to the left nipple line. No crepitus felt. *Genitals, extremities and pupils* negative. *Knee-jerks* sluggish.

Before operation *chart* normal, *urine* negative, *blood* not recorded.



January 6 operation was done. The patient made a fair ether recovery. Next day he had severe bronchitis. The wound drained profusely. The discharge was almost entirely bile; little blood. The patient was fairly comfortable with morphia. January 9 there were signs of consolidation in the right lower back. January 13 the general condition was somewhat improved, but both lungs were full of râles. There was slight discharge from the wound. That night he got out of bed for no apparent reason. The following morning while on the bed pan he suddenly became markedly cyanotic and fell back moribund. He rapidly became worse and died.

#### DISCUSSION

BY DR. EDWARD L. YOUNG, JR.

This is a very short story for a tumor of the liver of any kind.

This was a good many years ago, so that several of the laboratory tests we should like were not done. Of course this had been going on longer than a month, because we are told that the ribs were bulging on the right, and it takes more than a month to make a very definite change in the rib outline. He was a Greek and presumably he has had a chance to get infected with the echinococcus, which can change very rapidly.

There is no mention of jaundice. It would be unusual, in fact I think it is entirely out of the question, for this to be a gall-bladder distended because of obstruction of the cystic duct. Metastatic tumor does not grow so fast as this,—in fact I think would never get to the size described here without showing something else in the condition, in fact probably causing death before it reached this point. Abscess of the liver: there is no past history of amebic infection, no temperature, and nothing in the chart to suggest it. Is it something other than the liver? We do not know surely that it is not kidney,—a large hydronephrosis. We can rule out abscess of the kidney on the chart and the negative urine. It would be very unusual for a tumor of the kidney to be as large as this without causing other symptoms. Hydronephrosis might exist. Could a pancreatic cyst be in this position and as large as this? It seems to me very unlikely. I should like to have had an echinococcus fixation test done. But this was, I suppose, before the days when it was done.

It seems to me the only thing we can say is that this is a tumor which from its position and shape across the abdomen would suggest a tumor of the liver. Is any condition of the liver itself possible? Biliary cirrhosis—the very unusual type of hypertrophic cirrhosis does not go so rapidly as this, although a few cases that we have seen here have all come in with symptoms of pain and mild jaundice. Operation showed only

a large liver. There is no other evidence of ordinary portal cirrhosis. I think as we have the story here we are simply entitled to guess and say exploratory operation on the chance that there is a condition which we can help. I should suggest echinococcus cyst on the evidence I have.

#### DR. YOUNG'S PRE-OPERATIVE DIAGNOSIS

Echinococcus cyst of liver.

#### PRE-OPERATIVE DIAGNOSIS (MADE IN OUT-PATIENT DEPARTMENT)

Echinococcus cyst of liver.

#### Operation

Gas and ether. Six inch right rectus muscle splitting incision. A large liver presented. In the omentum was found a cyst the size of a hen's egg. This was shelled out whole. The bleeding points were tied. A small intestinal clamp was placed to the portal vein and hepatic artery. A four inch incision was made in the anterior surface of the liver over a cyst. A cyst the size of a grapefruit with thick wide wall bulging through the wound ruptured with the escape of a large quantity of yellow fluid. The sac of the cyst was removed intact. In the upper part of the liver bulging from the diaphragmatic surface of the right lobe was another cyst the size of a baseball. This was ruptured into the cavity of the large cyst and its sac removed through the original wound in the liver. On further examination a fourth cyst the size of a baseball was found in the left lobe of the liver. It was thought best to postpone its removal and it was not disturbed. Walling-off gauzes were removed. The cavity in the liver was siphoned out by a rubber tube. The edges of the liver wound were sutured. A little bleeding followed the removal of the clamps. Three rubber tubes wrapped in gauze were placed to the bottom of the cavity. One cigarette wick was placed between the diaphragm and the liver and one in the region of the gall-bladder. The wound was closed to the wicks. The patient was sent to the ward in fair condition.

#### FURTHER DISCUSSION

Nothing is said about any daughter cyst,—in other words a sterile echinococcus cyst. Today the reaction to blood test for that is very accurate, so that the diagnosis when suspected can be confirmed or ruled out in practically all cases.

This death gives the picture of a pulmonary embolus so far as there is any picture,—the sudden onset of cyanosis, coma, and death.

## CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Echinococcus cysts of the liver.  
Pneumonia.

## DR. EDWARD L. YOUNG'S DIAGNOSIS

Echinococcus cysts of the liver.  
Pulmonary embolism.

## ANATOMICAL DIAGNOSIS

1. *Primary fatal lesions*

Echinococcus cysts of the liver.

2. *Secondary or terminal lesions*

Purulent bronchitis.  
Bronchopneumonia, double.  
Fibrinopurulent pleuritis, right.  
Hyperplasia of the spleen.  
Congestion of the kidneys.

3. *Historical landmarks*

Operation wound, evacuation of echinococcus cysts.  
Chronic pleuritis.  
Focus of obsolete tuberculosis in a bronchial lymphatic gland.  
Chronic perisplenitis.

DR. RICHARDSON: We were not permitted to examine the head.

The peritoneal cavity contained a small amount of slimy bloody fluid, and there was a little reddish discoloration of the peritoneum; no definite peritonitis, however.

The anterior margin of the liver was one hand below the costal border.

The right pleural cavity contained a small amount of yellowish cloudy fluid, and flakes of fibrin—fibrinopurulent pleuritis; the left side none. There were a few old fibrous pleural adhesions.

One of the bronchial lymphatic glands showed some fibrocaseous degeneration,—obsolete tuberculosis. The lungs showed bronchopneumonia, and a purulent bronchitis was present.

The circulatory apparatus generally was negative.

The liver weighed 2933 grams,—considerably enlarged. In the region of the top of the right lobe of the liver, pushing into the liver substance and up along the diaphragm, there was an evacuated cyst nineteen cm. in diameter, the walls thick, a firm gray shell,—an echinococcus cyst. The superior walls of the cyst were firmly adherent to the diaphragm, but there was no break in the continuity of the diaphragm. In the left lobe of the liver there was a deep depression, and in this depression a cyst which was attached

by adhesions and firmly bound to the diaphragm. There was no interruption of the continuity of the diaphragm or pericardium. This cyst looked not unlike a prolongation of the left ventricle of the heart.

The portal vein and bile-ducts in the region of the lesser omentum were free.

The spleen weighed 272 grams,—slightly enlarged. He was a Greek.

The kidneys weighed 475 grams. That is large, but both macroscopically and microscopically they showed only cloudy swelling of the epithelium of the tubules and engorgement of the vessels with blood.

DR. YOUNG: Was there no pulmonary embolus?

DR. RICHARDSON: No.

DR. YOUNG: He died then simply because he had too much in his lungs and suddenly used up his reserve, because he died within a few minutes. Can one die like that with a double pneumonia?

DR. CABOT: No. I should say there was some other factor we have not got here. I do not know anything about successful surgery of echinococcus cyst of the liver. In Australia they have a great deal of it, I believe, and do a great many operations.

DR. YOUNG: So far as I know it is fairly successful. That is, we can either take out the cysts if that is technically possible, or simply open them, marsupialize them, and keep them lightly packed until the wall sloughs off and they fill up. They generally protrude on the surface so that one of these things can be done.

DR. CABOT: One hopes to get all the cysts, I take it?

DR. YOUNG: Yes, either out or packed.

DR. CABOT: It seemed in this case almost impossible to get all the cysts.

DR. YOUNG: The surgeon recognized it, and if it had been possible to open them and pack, that would have got away with it. But as I understand the description they were sterile cysts, so that just opening and packing in that case would have been enough.

DR. CABOT: I do not know how many present have gone over in books on diagnosis the old phrase "hydatid thrill." When we are learning about palpation we learn that we palpate tumors, frictions, vocal fremitus. All of those we learn, and this  $\alpha$  besides, the "hydatid thrill." I used to hear about it for years and years. I saw a number of cases of hydatid and none of them had it, and I got almost ready to say it was a myth, until about ten years ago Dr. Lincoln Davis stopped me one day and said, "Did you ever feel a hydatid thrill?" I said, "No." "Well," he said, "you'd better go up in Ward So-and-So and feel one." It certainly is a thrill in every sense. It is utterly unlike anything that one has ever felt and one never forgets it. One gives a sharp push against a tumor, holding

the hand there, and after a moment one feels something come bouncing back against the hand. That is, we push the daughter cysts away; they go down, and as they come up they hit the hand. It is an absolutely diagnostic thing so far as I know, but we do not always get it.

DR. YOUNG: This was a sterile cyst, without daughter cysts.

DR. RICHARDSON: There is a point which should be mentioned. These cysts rested along the vena cava and its hepatic radicles, on which they pressed. This apparently was the cause of the congestion of the kidneys. What did they clamp?

DR. YOUNG: They clamped the lesser omentum with the hepatic artery and portal vein.

DR. RICHARDSON: Sometimes after clamping strange things occur.

DR. YOUNG: I wondered if the clamping did not give a chance for some thrombosis.

## Book Reviews

*Dreads and Beseiting Fears.* By TOM A. WILLIAMS, M.B., C.M. Pp. 217. Boston: Little, Brown & Company.

This the seventh volume of the admirable Mind and Health Series, edited by H. Addington Bruce, discusses a subject of great importance, for a large majority of the neuroses showed some form of morbid fear or anxiety as part or a whole of their clinical symptomatology. Unfortunately, however, the book under review, while it gives a clear and in many cases a brilliant description of the various manifestations of morbid fear, does not penetrate deeply into real genesis of these fears, the author being content to inculpate a precipitating emotional episode as the etiological cause of a specific morbid fear or anxiety.

The viewpoint of this volume is influenced by the French school of psychopathology, a school which has produced brilliant clinical descriptions, but is satisfied with a superficial explanation of neurotic symptoms. For even Dr. Williams is forced to admit (p. 36) in referring to Janet, the most prominent contemporary figure of French psychopathology, "He failed to penetrate very deeply into the genesis of these patients' symptoms, and is often content to inculpate heredity without ascertaining the determinative sources of the patient's difficulties." The French school, with its insistence on heredity, its fanciful theory of a "lowering of the psychological tension," has produced only sterile formulae and stereotyped phrases, such as the concept of psychasthenia and the insistence on "suggestion." Psychoanalysis, however, has not only illuminated the real mechanism of the

fear neuroses, but at the same time furnishes a radical and permanent therapy.

The volume advocates persuasion, association therapy, reeducation, and suggestion, whatever these terms may connote. Mere intellectual explanations of apparently baseless fears do not cure the condition, for such an explanation only changes the conscious attitude without influencing the unconscious setting of the fear, as the victim of these morbid dreads is as fully aware of their absurdity as the physician himself. These dreads have their roots deep in the unconscious; the object dreaded is merely a symbol representing a primitive type of thinking, such as, for instance (p. 16), the general terrified at a harmless cat, where the cat, if the subject were investigated deeply enough, would be found to be an animistic totem. Anxiety is not chronic fear (p. 51); it is a sort of barrier against the development of fear, a protective mechanism to prevent the patient seeking those situations which would produce fear. The chief criticism against all so-called associations and suggestive therapy, on which so much stress is laid in this volume, is that it is too superficial, it deals only with conscious motives and not with the unconscious determinants of the fears. One of the best sections of the book is the discussion of the gastric neuropathies and the demonstration of how acute or chronic emotion may produce a large variety of gastro-intestinal disturbances.

*Rhus Dermatitis from Rhus. Toricodendron, Radicans and Diversiloba (Poison Ivy), Its Pathology and Chemotherapy.* By JAMES B. MCNAIR. University of Chicago Press, 1923. Price \$4.00.

The author presents a very fine monograph on the subject, taking it up from the botanical point of view—distribution of the three American species, and the morphology and anatomy, from the chemical viewpoint, and finally the medical. Considerably more than a thousand botanical and medical references in the literature are cited.

*Laboratory Diagnosis of Syphilis.* By HIDEO NOGUCHI. New York: Paul B. Hoeber, Inc., 1923. Price, \$7.50.

The author presents in condensed form the various steps leading up to the Wassermann and other serum diagnostic methods in the diagnosis of syphilis; the diagnostic value of the serum reaction of syphilis; the luetin reaction; examination of the spinal fluid; dark field and other methods for the detection and study of the treponema pallidum. The author needs no introduction and the book is written with his usual care and thoroughness. It will be of greatest value to the laboratory workers, and students in the field, but should be of use as a reference work to all clinicians.

## THE BOSTON Medical and Surgical Journal

Established in 1828

Published by The Massachusetts Medical Society under the jurisdiction of the following-named committee:

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SUBSCRIPTION TERMS: \$5.00 per year in advance, postage paid for the United States, \$7.50 per year for all foreign countries belonging to the Postal Union.

Material for early publication should be received not later than noon on Saturday. Orders for reprints must be sent to the printer with galley proof of paper. Upon written request, authors will be furnished free one hundred eight-page reprints, without covers, or the equivalent in pages in articles of greater length.

The Journal does not hold itself responsible for statements made by any contributor.

Communications should be addressed to The Boston Medical and Surgical Journal, 126 Massachusetts Ave., Boston, Mass.

### ACIDIFIED MILK IN INFANT FEEDING

It has long been recognized that the human stomach secretes hydrochloric acid as a necessary factor in gastric digestion. Notwithstanding this knowledge, as well as the knowledge that sweet milk must of necessity become acidified and curdled after entering the stomach, the acidification of milk in infant feeding, except as it may be naturally acidified by bacterial action, has been looked on askance.

Faber, in the *American Journal of Diseases of Children* for November, 1923, makes note of the buffer, or acid binding action of cow's milk, which is considerably higher than that of breast milk. This buffer action, by reducing the level of acidity of the gastric contents, prevents activation of various gastric enzymes, notably chymosis, lipase, invertase and pepsin. Rennet becomes activated at a lower level of acidity. This factor, it is believed, may explain the relative indigestibility of sweet cow's milk as compared to human milk, and may account for many of the difficulties encountered in the artificial feeding of infants.

"One is led to consider the possibility," Faber states, "that the use of sour milk is beneficial because it increases the activity and availability of gastric lipase, initiating at an earlier period the difficult process of fat splitting, in-

creasing the amount split in the stomach (where perhaps, in the presence of increased soluble calcium salts, calcium soaps are more readily formed, to appear eventually as the basis for the characteristic stools), and thereby promoting the completion of the task by pancreatic lipase in the intestine."

Faber further found that, to reduce the buffer value of cow's milk approximately to that of human milk, it was necessary only to add 25 c.c. of tenth normal hydrochloric acid to each 100 cubic centimeters of milk; in brief, to produce 25 per cent. hydrochloric acid milk, a milk which falls just short of being perceptibly sour and disagreeable to the taste. Further benefits from such a milk may be found in its inhibitory action on bacterial growth and the furtherance of calcium and phosphorus ionization by the acid, with resulting prevention of tetany and rickets.

This milk has been found to have a striking effect in most of the intestinal disorders of infancy, especially in the diarrheas, which are checked usually within 24 to 48 hours with the appearance of calcium soap stools, a factor bearing out the theory of increased lipolysis.

Convenience in preparation over bacterially soured milk, and ease of the graduated return to unsoured milk, are cited as arguments in favor of hydrochloric acid milk. On account of the natural alkalinity of the gastric contents of very young infants, the use of this milk in the first six weeks of life is not advised.

Marriott and Davidson, in the *Journal of the American Medical Association*, December 15, 1923, attack the same problem from a slightly different angle. Marriott in 1919 (*J. A. M. A.*, 73: 1173, Oct. 18, 1919) first advocated the use of lactic acid milk with the addition of a high percentage of sugar in the artificial feeding of athreptic infants. Karo corn syrup was the sugar of choice on account of its high content of unfermentable dextrin. Advantages of acid milk claimed, besides its low buffer action, are its freedom from pathogenic bacteria; the fineness of the curd; denaturation of the protein; stimulation of the flow of bile, pancreatic and intestinal secretions; favorable effect on absorption of fat, protein and mineral matter, and stimulation of the muscular construction in the gastro-intestinal tract. Whether or not all of these theories are tenable, certainly marked benefits have resulted from the use of acid milk.

Within the last two years Marriott and Davidson have simplified greatly the production of lactic acid milk by adding lactic acid to boiled sweet milk, and have extended its use to practically all infants, whether healthy or ill. Their present method of production is to add slowly to cooled boiled milk U. S. P. lactic acid in the proportion of a dram to a pint, and Karo corn syrup in the proportion of an ounce to a pint. The amount only of this formula given varies



with the age of the infant. The average caloric intake of infants on this food is 70 calories per pound, some receiving more than 90 calories per pound.

When we consider that approximately 90 per cent. of the infants in the wards of the St. Louis Children's Hospital during the last two years have been fed on this mixture, and that the mortality among athreptic infants in the hospital has fallen from 78 per cent. in 1919 to 26 per cent. during the past year, we must be prepared to believe that a new era may be dawning in infant feeding, even if the method is surprisingly simple.

### NEW OBSERVATIONS ON STERILITY IN ANIMALS

THE progress of medicine has been materially aided by the study of disease in animals. Even when the etiological factor in the latter is one which does not attack man, a knowledge of the method by which it produces lesions or of the mode of its transference from one individual to another may greatly illuminate a similar condition in man. An example of thorough, careful analysis of a pathological situation in veterinary medicine, a study which may well serve as a model in human medicine, is found in "The Male as a Spreader of Genital Infections," by W. L. Williams. (*The Cornell Veterinarian*, April, 1923.)

In this article Williams attacks the prevalent belief that the chief cause of infertility in cattle is the Bang bacillus (the organism of contagious abortion) and that the female is the sex chiefly concerned. In a logical and irrefutable manner, he shows that the male may be the carrier of a virulent infection. This infection not only reduces the fertility of the male, but it sets up as well an acute metritis in the females, thereby rendering them sterile, or, at any rate, of greatly reduced fertility. This condition he found existing in bulls and stallions, due to an infection of the epididymes and seminal vesicles with the streptococcus viridans and hemolyticus. In support of his thesis, Williams gives the breeding records of various animals, the history of infection in the females they served, the clinical findings, and in some cases the pathological and bacteriological findings as well. Histologic sections of the genital organs showed desquamation of the germinal epithelium of the seminiferous tubules of the testicles, destruction of the epididymal mucosa, and desquamation of the mucosa of the vas and of the seminal vesicles.

In other cases of sterility, he found that comparative azoospermia followed excessive demands upon the sexual apparatus. While males varied considerably in the degree to which they could be used before becoming sterile, it was Williams' opinion that 250 services per annum

would ruin probably four out of every five bulls.

Fortunately for man, there are, so far as is known, no infections of his genital tract which can be transmitted to woman except the three venereal diseases. An acute streptococcus infection of the vesicles would in all probability constitute a bar to intercourse; otherwise infection of the uterus might conceivably occur.

The problem of sterility in animals, viewed as a whole, has a bearing on the same problem in man, and a study as well conducted as this one of Williams' should be noted by those interested in this question.

### A COMMON DISEASE

*The Journal of the American Medical Association* has published a rather inconclusive and therefore unsatisfactory editorial on the "common cold." Its inconclusiveness is its unsatisfactoriness; it is a question, however, if this exceedingly common and annoying disease can be conclusively discussed. Little is known about its etiology. Most of us have been accustomed to cling to a belief in its infectious origin; the evidence seems to point to such an etiology, and the majority of us will undoubtedly persist in our belief until the contrary has been proved, despite the efforts of the editorial in question to shake our faith. Nevertheless, the etiologic factor has not been demonstrated, and until such is the case, the infectious origin of this ailment cannot be proved.

The organisms most commonly credited with the causation of colds are normal inhabitants of the upper respiratory tract in health. Notwithstanding this fact, we must not fall into the error of seizing upon the innocent bystander as the author of an outrage. We have been led to believe that these organisms, ordinarily held in check by our natural resistance to them, are given an opportunity to attack us actively by a weakening of that resistance due to chilling the body surface—a condition which is popularly supposed to predispose to catching cold. Prophylactic vaccination against colds with these organisms, properly controlled and carefully evaluated, has not been successful. Dr. Frederick T. Lord in *The Commonwealth* (No. 6, 1922) inclines to the view that an unidentified filterable virus is the probable cause.

It may be that there is more than one type of cold; that some are truly infectious in origin, and that others are due to thermal, mechanical, or chemical reactions. We are all familiar, some of us unfortunately so, with the vasomotor rhinitis of hay fever in which the naso-pharyngeal mucous membrane, though uninfected, becomes turgescient and congested. We are accustomed to living in an atmosphere of which the minimum humidity is 45-50 per cent. of complete aqueous saturation. In the winter

time the atmosphere of our artificially heated and ill-ventilated homes falls far below this minimum, and it is in the winter time that colds are most prevalent. Even at the risk of being considered *post hoc ergo propter hoc* reasoners, we would dare to suggest that this is a factor of no little importance in lowering our resistance to this disease. Moreover, the frequency with which the ailment spreads from one member of a family to another, after a definite incubation period, gives added prestige to the standard-bearer of the infectious theory.

No matter what we may believe as to the etiology of the common cold, there can be no question as to the infectious nature of its complications and sequelae. Fifty per cent. of our cases of pneumonia, according to Lord, follow on the heels of what was apparently a common cold. Sinusitis, almost always a sequela of a cold, is definitely an infection. The incidence of otitis media, an infectious disease in infants and children, following head colds, is at least striking. In general, it may be said that whatever the true etiology of common colds, they soon become infectious in nature. Moreover, until our knowledge is further augmented, we can probably do little better than to follow Lord's rules for prevention: "Persons with colds should avoid unnecessarily close contact with others, and, so far as possible, stay away from meetings, theatres, halls, and other places where people congregate. When abed with the acute manifestations, handkerchiefs or clothes soiled with nasal secretion should be placed in a paper bag pinned to the bed, and boiled before they are handled. Opportunity for drying and distribution as dust of nasal discharges or expectorated material should as far as possible be avoided. Dry sweeping of rooms should not be permitted, and vacuum cleaners are to be preferred. An abundance of sunlight in rooms will diminish the chance of infection."

#### EXPERIMENTS ON THE EFFECT OF TEMPERATURES ON THE HUMAN BODY

If it were possible to so inclose a man that he could continue to breathe and no heat could escape from his body, he would die within a short time, states Dr. T. T. Read, supervising mining engineer, Department of the Interior, and F. C. Houghton, of the American Society of Heating and Ventilating Engineers, in Serial 2554, just issued by the Bureau of Mines. The normal temperature of the human body is about 98.5° F., and whenever work is done by the muscles, indeed even when sitting still, the normal bodily processes generate heat which must be given off, otherwise the body will become overheated and a number of bad effects will be produced. In a series of experiments made at

the Pittsburgh Station of the Bureau of Mines, it was found that a dry-bulb and a wet-bulb temperature of 112.5° F. could be borne for only 35 minutes, even when the subject was at rest. A wet-bulb temperature of 100.4° F. (dry-bulb 157° F.) could only be tolerated for 45 minutes. Under such conditions the bodily temperature rises as much as 4.5° F. above normal and the pulse is accelerated. Very uncomfortable sensations are felt when the pulse rate exceeds 135. The human body, like any other internal combustion engine, must be cooled in order to function properly.

Under ordinary circumstances the air surrounding people is enough cooler than themselves to permit this heat generated within the body to be given off without difficulty. At higher temperatures, or when the rate of work, with its corresponding generation of heat is high, the body cannot throw off heat fast enough, so it begins to sweat, and the evaporation of the sweat cools the body. But the results of the experiments cited above indicate that in still air, even with the body at rest, it cannot adjust its temperature when the air is above 90° wet-bulb. J. S. Haldane, eminent English scientist, has determined that at a wet-bulb temperature of 80° F. the actual amount of work done by the miner begins to fall off; as the wet-bulb temperature rises farther the work done gradually diminishes to the vanishing point. When the temperature indicated by the wet-bulb exceeds 85° F. hard work in a mine seems hardly possible. For the commercial working of a mine the wet-bulb thermometer should not, in general, be allowed to rise above 80° F. unless perhaps where there is a good current.

#### DEFECTIVE VISION

The Eye Sight Conservation Council of America states in a report that millions of school children are handicapped in their studies by defective eyes. Thousands of children are suffering from eyestrain and large numbers are forced to discontinue their endeavors to acquire an education because of this same physical defect. It has been proven conclusively that poor eyesight is an important associate cause of backwardness, stupidity, apparent laziness, and truancy.

The report estimates that at this time the number of school children enrolled in the elementary and secondary schools of the United States exceeds 24,000,000, or over 20 per cent. of the population. More than 60 per cent. of this number are said to have eye defects of sufficient degree to warrant correction.

Even simple visual tests reveal 25 per cent. with manifest defects and symptoms of eyestrain. Many are contending with vision so

defective that mental development is seriously retarded, and comfort, health, and even safety are jeopardized. Fully 6,000,000 of our school children are at a disadvantage in their efforts to gain an education.

Conclusions set forth in the report, applying to the country as a whole, point out that there is a wide diversity in the provisions and regulations. It was found that statutory provisions for the examination of the eyes of school children have not been adopted generally by State Legislatures, and that only 20 States have statutes providing for eye tests. There are only two other States that have board regulations which take the place of statutes. In most instances general physical examination laws are not interpreted to include eye tests.

The responsibility lies with the State Boards of Education, which "should issue mandatory regulations providing for the conduction of eye tests in every urban and rural school in the State." In nearly all States little is being done outside the larger cities. There is pressing need for eye conservation in the smaller towns and in the rural districts as a part of the general plan to improve country life. Coöperation of State Boards of Health is advocated.

## EPIDEMIOLOGY OF THE COMMON COLD

THE etiology and prevention of the common cold have long evaded capture by the medical profession. Each layman and every doctor has his own convictions as to the cause, prevention and treatment of the typical respiratory infection known as a "cold." Only by careful study of much data can any valuable conclusion be reached, and such data are difficult to collect.

The United States Public Health Service is making determined effort to bring together from all parts of the country certain valuable facts regarding the past illnesses and daily lives of many thousands of American citizens. The Enrollment Record is as follows:

### UNITED STATES PUBLIC HEALTH SERVICE

#### EPIDEMIOLOGICAL STUDY OF COLDS AND OTHER MINOR RESPIRATORY AFFECTIONS

##### Enrollment Record

1. Name..... Sex..... Color.....
2. Present Address.....
3. Permanent Address.....
4. Date of Birth: Year.. month.. day of month..
5. Have you ever had an attack of  
Pneumonia? Yes.. No.. In what year?..
6. Did you have Influenza during the epidemic of  
1918-19? Yes.. No..
7. Have you had Influenza since the epidemic of  
1918-19? Yes.. No.. Year and month....
8. Are you, so far as you know, subject to any of  
the following Chronic Disorders:

##### Yes No

- a. .. .. Tuberculosis
- b. .. .. Asthma
- c. .. .. Hay fever
- d. .. .. Obstruction of one or both nostrils
- e. .. .. Chronic "sinus" infection (refers to  
antrum as well as to frontal and  
ethmoid sinuses)
- f. .. .. Bad tonsils
- g. .. .. Any other nose, throat, or lung  
trouble? (Specify).....
9. Have your tonsils been removed? Yes.. No..
10. Please indicate by check (X) in proper space  
below how you habitually keep your bedroom  
windows during your sleep in cold weather:  
wide open .. open a few inches closed ..
11. Please indicate similarly the kind of undercloth-  
ing which you habitually wear in winter:  
heavy .. medium (winter weight)  
light (summer weight) ..
12. About how many hours a week do you habitually  
spend in physical exercise?  
a. Out of doors.....hours per week.  
b. Indoors.....hours per week.
13. Approximately how many colds do you ordinarily  
have in the course of a year?  
one two three four more than four  
.. ..

Information furnished upon this record will be  
considered confidential, to be used by the  
Public Health Service only for  
statistical purposes.

Each two weeks after enrollment the individual under observation is to fill out other blanks answering more detailed questions relevant to acute infections during the winter months.

We wish the public health officials all success, and urge the members of the profession to coöperate freely with those who are struggling towards the solution of a problem that has baffled the bacteriologists and internists for centuries.

## EPIDEMIOLOGY OF COLDS IN INFANTS

WINHULT and Jordan in the *Journal of the American Medical Association* for July 28, 1923, have analyzed a study of 500 babies with and 500 babies without colds. They find that the occurrence of colds in infants is accompanied by a high incidence of colds in the respective families, and that the existence of a cold in the mother is accompanied by a cold in the baby in a very high proportion of the cases.

The incubation period of the cold is short, as the symptoms generally appear before the preceding patient's cold had subsided.

There is, however, apparently, a high resistance to such exposure, as exposure to mothers' colds has occurred in nearly half as many cases of babies without colds as of those with colds, and babies with and without colds have been equally exposed to colds in the father. It is suggested that colds are due to a widely disseminated virus of low infectivity.

The evidence gained from this study seems

to be in favor of the infectious nature and origin of colds, a belief which will probably continue to be held by the majority of physicians.

### THE BOK PEACE PLAN

RELATIVELY few physicians have the honor conferred upon them or the responsibility imposed upon them of participation in world politics. Nevertheless, to justify our position as an intellectual profession it becomes our duty to be cognizant of important national and international affairs, for decision as to the final action of a nation such as ours rests ultimately with the electorate.

We have all had the opportunity of reading and discussing the winning plan selected by the jury of the American Peace Award offered by Edward W. Bok. It becomes in some sense a duty to form an opinion of the plan and to participate in the vote of the American people to which it is submitted.

### A NEW MEDICAL JOURNAL

THE *Memphis Medical Journal*, owned by the Memphis and Shelby County (Tenn.) Medical Society, started on its career January, 1924. It will be published monthly.

The *Journal* is a credit to the society. At the annual meeting held December 19, 1923, there were 125 members in attendance. This section of the South has many well-qualified practitioners, and if support is given to this journal it will be of value to the profession.

### Legislative Matters

#### BULLETIN OF THE JOINT COMMITTEE ON STATE AND NATIONAL LEGISLATION

JANUARY 15 was the last day for filing bills for the Legislature of 1924, and several measures, very important from the medical standpoint, will come before the respective committees, for action. On January 15 a hearing was held, before the Committee on Public Health, on a bill relative to the qualifications of applicants for examination for registration as physicians.

This bill meets with our approval and ought to pass.

On the same day, and before the same committee, the bill relative to the registration of nurses and nursing attendants, was heard. There has been no report of the committee as yet, on either bill.

On January 22, before the Joint Judiciary Committee, House Bill 695 was heard. This bill is to increase the punishment for abortion, and attempts to commit abortion, and is the petition of Margaret Taylor. Senate Bill 28, introduced by Hon. William J. Francis, is sim-

ilar, and reads, "Whoever, with intent to procure the miscarriage of a woman, unlawfully administers to her, or advises, or prescribes for her. . . or uses any instrument or other means whatever . . . shall, if she dies in consequence thereof, be punished by imprisonment in the state prison, for not less than thirty years; and if she does not die in consequence thereof, by imprisonment in the state prison, for not less than fifteen, nor more than twenty years."

On January 23, House Bills 169, 182, 185 and 321 were heard before the Committee on Public Health. Bill 182 is of interest to physicians, as it relates to the possession and use of hypodermic syringes. The Department of Public Health recommend certain changes in the stringent rules, in order that diabetic patients, using insulin, may be permitted to continue their treatment, without violation of the law. This bill should pass.

On January 24, before the Committee on State Administration, there was a hearing on Senate Bill No. 9. "Resolve providing for an investigation relative to additional hospital facilities for treatment of persons afflicted with incurable diseases."

Among the many bills filed, we notice several having some constructive merit, as the establishment of a state hospital for cancer; that patent medicines containing over 6 per cent. of alcohol require a prescription from a physician; that charges for support of patients at state sanatoria be regulated; that the liability of hospitals for the death of patients caused by criminal negligence be determined; that radium be purchased by the Commonwealth of Massachusetts for use of cancer patients; that there be a state school of instruction for nurses and attendants; and that a special commission be appointed for medical survey and research.

Middlesex College asks for authority to grant degrees in dental surgery, medical dentistry, podometry, and optometry. Perhaps the investigation by authorities from the American Medical Association, and the State of Connecticut may help us to better judge the fitness of this college to grant degrees.

House Bill 746 is to create a board of examination and registration, to regulate the practice of chiropractic.

This bill should be defeated, and calls for early, earnest, and determined action on the part of every member of the Society. The members of the Auxiliary Committee should see that the representatives of each district are personally interviewed by the family physician, and acquainted with the facts concerning chiropractors. The general public should be informed of the method by which we determine the fitness of applicants to undertake the serious study of medicine. A high school diploma, and two years of prescribed college work, simply entitle an individual to apply for admission to a Class



A medical school. The number admitted is necessarily limited and the best educated men are selected. After completing the required four years of prescribed study, if successful in passing the final examinations, he receives his degree, and is entitled to take his examination for registration in medicine. Two to three years are then spent in a hospital as an interne, before the man, now nearing his thirties, is qualified to undertake the practice of medicine.

Compare this preparation with that of the man who enters the chiropractic school, often without completing the grammar school course, and spends but little time before receiving his degree! It is manifestly unfair to the general public, to the physician, to the patient, and even to the man practicing chiropractic, to permit him to take a special examination, given by men of similar training (or rather, lack of training) to practice medicine, when the graduate physician is compelled to be proficient in all branches of medicine, and to pass a rigid examination by the State Board of Registration before being permitted to practice.

### Miscellany

#### AMERICAN CHEMICAL SOCIETY'S PRIZE ESSAY CONTEST

HEADED by Herbert Hoover and made up of men and women leaders in practically every field of endeavor, a National Committee formed to act as judges in the American Chemical Society's Prize Essay Contest was announced recently.

Dr. Charles H. Mayo of the Mayo Foundation at Rochester, Minn., represents the medical profession on the committee; Frederick E. Weyerhaeuser, the lumber field, and Julius Rosenthal of Sears Roebuck and Company, Chicago, the merchants of the country. Prominent women on the committee will be Alice Ames Winter, president of the General Federation of Women's Clubs, Ida M. Tarbell, and Jane Addams. Dr. J. R. Angell, president of Yale University, and Dr. H. N. MacCracken, President of Vassar College, have accepted membership, representing the nation's educators, while the scientists will be represented by Dr. Robert Andrews Millikan, physicist, who has been the recipient of the Nobel Prize; Dr. J. C. Merriam, head of Carnegie Institution, and Dr. Edgar F. Smith, past president of the American Chemical Society and former provost of the University of Pennsylvania. Gen. J. J. Carty, chief engineer of the American Telephone and Telegraph Company, United States Senator Arthur Capper, who will represent the agricultural interests of the country, Robert J. Cuddihy of the *Literary Digest*, George Eastman of the Eastman Kodak Company, and United States Senator James W.

Wadsworth, Jr., chairman of the United States Senate Committee on Military Affairs, are also members of the committee.

The Prize Essay Contest, which is the result of a gift of Mr. and Mrs. Francis P. Garvan of New York, in memory of their daughter Patricia, is being conducted by the American Chemical Society. Every high school and secondary school student in the country is eligible to participate. Six cash prizes are being offered to the winners in each State, and six scholarships to Yale or Vassar will be the awards in the national competition between the state winners. Each contestant may submit one essay not to exceed 2500 words which must be confined to one of the following six subjects: The Relation of Chemistry to Health and Disease, to the Enrichment of Life, to Agriculture and Forestry, to National Defense, to the Home, to the Development of the Industries and Resources of Your State. The best essay on each of these six subjects in each State will be awarded \$20 in gold, and the six best essays will be selected by the National Committee from among the state winners.

The writers of the winning essays will be awarded four-year scholarships to Yale University or Vassar College, each scholarship to carry with it \$500 a year in cash, in addition to tuition fees.

The competition will close April 1, 1924, and on that date all competing essays must be in the hands of the designated state authorities.

#### AN ADVISORY COMMITTEE TO THE VETERANS' BUREAU

DIRECTOR HINES of the United States Veterans' Bureau has welcomed the offer of the State American Legion officers, made on behalf of the physicians and surgeons on the Legion Hospitalization Committee, to cooperate with the Veterans' Bureau on matters of hospitalization policy in this district, and has promised to submit many large questions for their advice.

The committee is not confined to Legionnaires, many non-veteran medical men having consented to serve in an advisory capacity. Dr. Joel E. Goldthwait of 327 Marlboro Street, Boston, is the chairman. With him will serve: Dr. F. W. Anthony of Haverhill, Dr. F. G. Balch of Boston, Dr. L. V. Briggs of Boston, Dr. Robert J. Carpenter of North Adams, Dr. Parker M. Cort of Springfield, Dr. F. J. Cotton of Boston, Dr. G. L. Curran of North Adams, Dr. Harvey Cushing of Boston, Dr. Homer Gage of Worcester, Dr. S. W. Goddard of Brockton, Dr. H. W. Goodall of Boston, Dr. J. B. Hawes of Boston, Dr. Hickey of Stoughton, Dr. George F. Keenan of Boston, Dr. W. J. Mixter of Boston, Dr. Brace W. Paddock of Pittsfield, Dr. C. F. Painter of Boston, Dr. Charles A. Pratt of New Bedford, Dr. D. D. Seannell of Boston, Dr.

R. H. Seelye of Springfield, Dr. P. E. Truesdale of Fall River, Dr. M. H. Walker of Pittsfield, and Dr. P. D. Wilson of Boston.

#### LAWRENCE MEDICAL CLUB

A MEDICAL meeting of the Lawrence Medical Club and guests was held at the Arlington Mills Industrial Hospital, Lawrence, Wednesday, January 9, 1924, at 8 p.m.

Program: Dr. Frederic J. Cotton, F.A.C.S., Boston, "Industrial Surgery"; Dr. Robert S. Quimby, Hood Rubber Co., "Industrial Medicine."

The management of the Arlington Mills arranged for visitors to see some of the interesting departments while in operation during the afternoon.

#### WORCESTER NORTH DISTRICT MEDICAL SOCIETY

THE third quarterly meeting was held at the Leominster Hospital, Tuesday, January 22, at 4.30 p.m.

Speaker, Dr. Frank H. Lahey of Boston. Subject, "Duodenal and Gastric Ulcers."

Luncheon was served at 5.30 and the hospital was inspected.

#### A DIGNIFIED PENSION

A PENSION of forty thousand francs per annum has been awarded to Mme. Curie, the discoverer of radium, by the French Chamber of Deputies.

#### Obituary

##### IGNATIUS HAINES, M.D.

DR. IGNATIUS HAINES, Chief Medical Director of the John Hancock Mutual Life Insurance Company, who died at his home in Brookline on January 16, was born in Cambridge, Mass., November 15, 1871.

He received his education in the schools of Cambridge, and graduated from the Harvard Medical School in 1897. He began the practice of medicine in his native city, and in April, 1901, was appointed as examiner for the John Hancock Mutual Life Insurance Company.

He was called to the Home Office for special medical duty in July, 1903. In 1917 he was appointed assistant medical director. In November, 1920, he was advanced to the position of associate with the medical director. In January, 1923, he was given the entire charge of the medical department as medical director-in-chief, with the title of medical director.

Dr. Haines was a member of the Massachusetts Medical Society, the American Medical Association, the Joseph Webb Lodge of Masons, the Algonquin Club, Brae-Burn Country Club, and the Boston Chamber of Commerce.

He is survived by his widow.

Dr. Haines' service in medicine naturally proceeded largely along the lines of hygiene and disease prevention. His unusual ability as an organizer, his breadth of view, and the extent of his information, had already made themselves felt in the short space of time in which he had free hand to shape the affairs of his Company along those lines of public service.

His death, while in the fullness of activity and ripened judgment and experience, is a loss which can ill be sustained by the institution and the causes which he served. His life he lived for others, and the friendships formed by the way were deep and tenacious.

#### A CORRECTION

ON page 85 of the issue of January 10, 1924, it was stated that Dr. Victor Isaiah Shapira had died. The obituary notice should have reported the death, December 26, 1923, of Dr. I. J. E. Shapira, who had occupied a prominent position among the practitioners of Boston. He was a charter member of Mt. Sinai Dispensary and the Beth Israel Hospital. He is survived by a wife and four sons, Drs. Victor I. Shapira and Albert A. Shapira, and Robert and Samuel Shapira.

#### News Items

REMOVAL.—Dr. Louis E. Phaneuf announces the removal of his office to 395 Commonwealth avenue, Boston, Mass.

LAWRENCE GENERAL HOSPITAL.—A clinical staff meeting of the hospital was held on Tuesday evening, January 8, at 8 o'clock. The subject discussed was "Obstetrics." T. A. Murphy, M.D., was chairman of the meeting.

The regular quarterly meeting of the staff of the hospital was held at the Nurses' Home on Monday, January 14.

BEVERLY HOSPITAL.—A demonstration clinic was held at the Beverly Hospital, Tuesday, January 15, at 4 p.m. The following cases were shown and discussed: Pleurisy with effusion; appendiceal abscess; osteomyelitis of right humerus; carcinoma of left parotid gland; fracture of right humerus; fracture of left ulna; excision of para-ovarian cyst; traumatic cyst of pancreas. Doctors were present from the surrounding vicinity.

## Correspondence

### A DEFENSE OF PUBLIC OFFICIALS AND A PLEA FOR RECOGNITION OF ALL FACTORS RELATING TO OBSTETRIC PROBLEMS

355 Marlborough Street, Boston.  
January 17, 1924.

Mr. Editor:

As one deeply interested in the development of good obstetrics, the formation of the Section on Obstetrics and Gynecology is to my mind a constructive step for progress. Therefore, it seems to me that some of your statements in the opening paragraph of your editorial on January third are peculiarly unfortunate, implying as they do distrust of our Department of Public Health and of the Children's Bureau, for I take it that is the meaning of your veiled statement of a "national bureau."

There is nothing in the history of the Massachusetts Department of Public Health to give reasonable ground for the statement that it is endeavoring to "place the conduct of private practice in Massachusetts" under its control. As far as I am aware, it is the policy of the present Commissioner, as well as of his predecessor, to seek earnestly the co-operation of the physicians of the State to further in every way the work for public health.

Your statement that statistics have "been unfairly collected and improperly compared" gives, to my mind, an entirely erroneous impression. It impugns the integrity of many very sincere, earnest workers. It is true there is an honest difference of opinion as to the proper classification of many of these maternal deaths, but they are all as classified by the International Causes of Death.

The publicity given the report of the Children's Bureau on Maternal Mortality aroused great interest among laymen all over the country. It was this interest that gave the physicians an opportunity for constructive work in the improvement of obstetrics. A community will receive from its physicians only the standard of work that it demands. The Children's Bureau has by its studies on child and maternal welfare stimulated the interest of the laity in these questions. If the laity had not become interested, the Sheppard-Towner Bill would never have become law. The Special Commission to Investigate Maternity Benefits was the result of this increased interest by the laity, and the Committee of the Massachusetts Medical Society on Maternal Mortality followed the work of this Commission. The formation of a Section on Obstetrics and Gynecology, therefore, is the direct result of added interest in obstetrics by the laity.

It is true, as your editorial states, that prenatal care alone can not bring about good obstetrics, but it is equally true that good obstetrics can not be done without prenatal care. Was it not a laywoman here in Massachusetts who started prenatal clinics?

We physicians should lead in the work, but to succeed we must recognize all the factors in the situation—the general public and those governmental authorities which we ourselves have constituted to care for the public health, and nothing can be gained by questioning the integrity of the one or the intelligence of the other.

Sincerely yours,  
ROBERT L. DE NORMANDIE.

MIDDLESEX COLLEGE OF MEDICINE AND SURGERY

Managing Editor,  
Boston Medical and Surgical Journal:

As I was present at the time of your examination of the Middlesex College, the only time an examination has been made by an editor of your jour-

nal, the Trustees have asked me to answer your editorial commenting on their letter to the President of the American Medical Association.

The wording of that letter to which so much of your editorial is devoted may have been disrespectful, addressed as it was to the president of so large and powerful a corporation. It may have been "vituperative" as you say in your first editorial on this subject, and it may have been both "scolding and whining" as you say in your second editorial, but I do not think you can charge that it is capable of being misunderstood.

Whether or not the letter accomplishes the purpose you ascribe to it, you will hardly deny that there are a large number of people, including leaders in educational and medical circles, who are not enthusiastic about the results accomplished by the Council on Medical Education in its efforts to secure improved medical service to the great mass of the American public.

The letter affects people differently. Of 73 replies from persons in all walks of life, there were three adverse criticisms—your own, and two from richly endowed medical schools.

It is quite true that at the examination of the school neither you nor Dr. Biggs,\* Dean of Boston University Medical School, were other than the courteous, cultured, broad-minded gentlemen that you both are, but I must call your attention to the fact that there is nothing in the letter that refers to either you or to your examination.

I will answer your contention that "every poor boy can secure a good medical education if he has health and the proper premedical education" by this incident. A boy with an A.B. '22 degree from a Massachusetts college applied to me for admission to the Middlesex Medical School. I asked him why he did not go to a class "A" school. He replied that he had interviewed the Massachusetts Schools, that he could not afford their fees, and that he would not accept the charity of a scholarship.

As you have assumed to champion the cause of the Council on Medical Education of the American Medical Association, may I hope that, with the American characteristic love of fair play, you will give this letter as much prominence as your own communication? Very respectfully,

JOHN HALL SMITH, Registrar.

NOTE: It is sometimes wise to read all the matters referring to a subject under discussion at one time in order to retain a correct impression of the arguments. If there exists in the mind of any person confusion or doubt as to the purpose and quality of the letter addressed to President Wilbur we would suggest reading it anew.

We are always glad to meet ambitious and independent young persons—but if independence defeats the great object of life it might be called bad judgment. Every medical student should be actuated by a purpose to make his life useful to its greatest capacity. The aid furnished in the class A medical school is not so much for the individual student but rather a contribution toward the development of better service to the race. The man who refuses to avail himself of proper aid is oversensitive and unreasonable. Even the man who pays all of the fees in a school accepts much that his fees would never have provided. Every student accepts charity to a greater or lesser degree. No body of students could support a modern medical school by any reasonable system of fees. They all accept the benefits of the endowments.

We would like to get in touch with this supersensitive student and try to fathom his mental processes. It would be interesting, also, to know the persons who approved the letter.

MANAGING EDITOR.

\*Dr. Biggs.

## BOSTON UNIVERSITY SCHOOL OF MEDICINE

Boston, January 16, 1924.

Mr. Editor:

In compliance with the request from the American Medical Association that instruction be offered in the examination of the apparently well, Boston University School of Medicine has made arrangements with the Boston Young Men's Christian Association, Huntington Avenue Branch, to conduct a series of examinations at that place. This work is conducted with the coöperation of the Recreation and Health Department of the Y. M. C. A., and consists of four two-hour periods weekly. The work is carried on under the general supervision of Doctor Garrick; co-operating with him are the residents of the Massachusetts Homeopathic Hospital. The fourth year students work in small sections and conduct a thorough examination, following the outline laid down by the American Medical Association. This work has been in operation since January 3rd and, so far, has been quite effective in calling attention to hitherto unexpected physical defects among the membership and employees of the Association. The matter is necessarily handled with great care, so as to avoid any conflict with the family physician. No treatment is carried out, but the individual is referred back to his family physician with the statement of the findings. It is hoped to make in this survey a very systematic study of this group and, undoubtedly, the findings will be of interest to the profession at large.

For your information I am submitting herewith a copy of the Y. M. C. A. paper, announcing the arrangement.

Yours sincerely,

A. S. BEGG, *Dean*.

## EXTRACT FROM THE BULLETIN Y. M. C. A.

A complete physical examination will be given each member who may care to make an appointment at the main desk in the lobby. A careful record of examinations will be filed in the records of the R. and H. Department for the information of physical directors, who will use this information as a basis for prescribing exercises. In the case of conditions being revealed which call for definite medical or surgical attention, examiners will advise the membership to see their own physicians for systematic treatment, or in cases where members do not have a family physician, they will be given a list of reputable specialists or general practitioners, from which they may choose.

The above arrangement does not pertain to members of the *Business Men's Club*. Such members will register with Mr. Larimore for examinations at the following hours: Tuesday, 12 to 1; Monday, 4:30 to 5:30; Tuesday, 4 to 5 p. m.; Friday, 4:30 to 5:30. These examinations will be handled by Dr. Garland and Dr. Smith.

This is a splendid piece of coöperation which is fine in itself, and, in addition, insures for the whole membership the best sort of medical oversight and advice. This is an invaluable asset and we may well be delighted with the arrangement as effected. The same sort of attention on the outside would command a high price, but here it is another of the benefits accruing from a "Y" membership.

## NOTICES.

## BOSTON ORTHOPEDIC CLUB

There will be a meeting of the club January 28, 1924, at 8:15 p. m., at the Harvard Club. Program: "Inflammatory Lesions of Bones," Dr. F. B. Mallory and Dr. F. J. Cotton. Discussion: Dr. John Morton. Host: Dr. W. R. MacAusland.

## CHANGE IN DAY OF DR. CABOT'S CLAF'S

The weekly clinico-pathological exercises in which the Case Records are discussed have been held during the autumn and the first part of the winter on Tuesdays at quarter to twelve. The first week in February the day of meeting will be changed to Saturday. There will be no class on Tuesday, February 5. The time and place of meeting will remain unchanged, quarter to twelve in the pathological amphitheatre of the Massachusetts General Hospital.

## THE NORFOLK DISTRICT MEDICAL SOCIETY

A regular meeting of the Society will be held at Masonic Temple, 171 Warren Street, Roxbury, January 29, 8:15 p. m. Business. Subject of the evening "Illicit Traffic in Narcotic Drugs," Thomas C. O'Brien, District Attorney.

The Society is fortunate in securing Mr. O'Brien for this meeting, for no man in Massachusetts is more conversant than the District Attorney on this important matter.

A full attendance is urgently requested, not alone for the benefits derived, but also to show respect to our honored guest.

BRADFORD KENT, M.D.,  
*Secretary.*

## JOINT MEETING

The General Meeting of the Suffolk District Medical Society in association with the Boston Medical Library and the Middlesex South District Medical Society. Drug Addiction and Crime, by the Hon. Thomas C. O'Brien, District Attorney of Suffolk County. January 30, 1924, at 8:15 p. m., at the Boston Medical Library, 8 The Fenway.

## SOCIETY MEETINGS

## DISTRICT SOCIETIES

- Bristol South District Medical Society:*  
The annual meeting will be held in New Bedford, May 1, 1924.  
*Essex North:*—Annual meeting at Lawrence General Hospital, May 7, 1924.  
*Essex South District Medical Society:*  
March 19, 1924.—Salem Hospital.  
May 7, 1924.—Annual meeting, Relay House, Nahant, in conjunction with Lynn Medical Fraternity.  
*Franklin District:*—Society meets at Greenfield the second Tuesday of March, May, July, September. Annual meeting in May.  
*Hampden District:*—The meetings for the year are as follows: January, 1924, at Springfield. April, 1924, at Springfield; annual meeting.  
*Hampshire District Medical Society:*  
Meetings held bi-monthly, the second Wednesday in the month, at Boyden's Restaurant, Northampton.  
*Middlesex South District Medical Society:*  
January 30, 1924.—Combined meeting with Suffolk District at the Boston Medical Library.  
February 27, 1924.—Combined meeting with the Surgical Section of Suffolk District at the Boston Medical Library.  
March, 1924.—Hospital meeting; place not yet determined.  
April, 1924.—Annual meeting.  
*Norfolk South District:*—Meetings first Thursday of each month at 11:30 a. m., February, March, April and May, at United States Hotel, Boston. The February and May meetings are stated meetings.  
*Suffolk District Medical Society:*  
January 30, 1924.—In association with the Boston Medical Library and the Middlesex South District Medical Society at the Boston Medical Library at 8:15 p. m.  
February 27, 1924.—Meeting of Surgical Section, in association with the Middlesex South District at the Boston Medical Library at 8:15 p. m.  
March 26, 1924.—Meeting of the Medical Section, in association with the Boston Association for the Prevention and Relief of Heart Disease, at the Boston Medical Library at 8:15 p. m.  
April 30, 1924.—Annual meeting to be held at the Boston Medical Library at 8:15 p. m.  
*Worcester District:*—The meetings for the year are as follows: February 13 at Memorial Hospital, Worcester.  
March 13 at City Hospital, Worcester.  
April 10.—A public meeting.  
May 8.—Annual meeting.